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ORIGINAL ARTICLES

A BRIEF CONSIDERATION OF POST-OPERATIVE GAS DISTENTION OF THE ABDOMEN, WITH SUGGESTION FOR PREVENTION.*

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It is not my purpose to include within the scope of this paper a discussion of those post-operative distentions of the abdomen due to strangulation ileus and septic peritonitis; but to sum up a few facts upon those concomitant to paralytic, dynamic and pseudo-ileus and intestinal atony.

The intestines have the function of absorbing gas from their lumen. This function is dependent upon their blood supply. The explusion of gas through the anus is dependent upon the tonus of the muscular fibers. A lack of muscular tone allows the collection of gases in greater quantity than the absorptive power or capacity of the gut can accommodate, hence a resulting embarrassment of the circulation rapidly ensues on account of the distention of the bowel walls. Thus, we have the formation of a vicious circle.

In dynamic ileus of Nothnagel we deal with just such a condition, a failure of the normal peristalsis. Physiologically we have two nervous influences affecting the intestinal movements. The intrinsic automatic center is the myenteric plexus of Auerbach, the extrinsic is chiefly the splanchnic nerves. It has been proven beyond a doubt that the splanchnic nerves are purely inhibitory. It has also been proven that the intestines retain their normal motor functions for weeks, after the splanchnics have been severed; but that all reflex and spontaneous movements cease when the myenteric plexus of Auerbach has been destroyed. Quoting Cannon

*Read in the Surgical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

and Murphy we should expect failure of peristalsis to follow inhibitory impulses through the splanchnic nerves, or to result from injuries or disturbances to the myenteric plexus, or from trauma to the muscles themselves. In other words the cause of dynamic ileus may be general, by way of the central nervous system, or it may be local in the inefficacy of Auerbach's plexus or the muscles which that plexus controls. They have proven that it is possible to produce reflex dynamic ileus experimentally and thus substantiated Nothnagel's theory of functional disturbance of the bowel in cases of crushed testicle and in abdominal injuries and in attacks of biliary and renal colic. Nothnagel and other contributors to the literature mention cases of ileus after aseptic laparotomy where no cause of intestinal paralysis was apparent macroscopically as to trauma or sepsis Krehl mentions the possibility of hysterical paralysis of the intestines, on the ground that hysterical paralyses are common enough in other parts of the body.

On the other hand Kocher believes that dynamic ileus is seldom if ever functional, but maintains that it is due to inflammatory and circulatory disturbances. Munro, in his paper before the American Medical Association holds the same views. Most of this discussion can be eliminated if we accept the classification of V. Mikulicz of ileus into three groups: (1) Strangulation ileus; (2) obturation ileus; (3) paralytic ileus.

Paralytic ileus, including intestinal atony occurs more frequently, to a more or less pronounced degree, than most of us realize. Vineberg, quoting Pankow, says that the intestines are in a condition of atony for a period lasting from three to four hours after every opening of the peritoneal cavity. Several causative factors have been recognized, viz., prolonged narcosis, manipulation and handling of the intestines, exposure to the air, injury and traction of the mesentery, preparatory and post operative care.

I believe that the amount and duration of narcosis plays a very small part in the production of atony and intestinal paralysis. I have seen patients under the influence of anesthesia for almost three hours, who showed no signs of this trouble; whereas others, who required only a small amount of the anesthetic rapidly showed signs of distention. Any operation which requires any considerable amount of exposure to air and cooling of the intestines has been, in my experience, productive of distress from gas. The same is true of manipulation and handling of the intestines. I find it possible to reduce the number of cases of distention by keeping the intestines protected with sponges soaked in warm normal salt solution. It is also an improvement in technic to use sponges, moistened in saline solution, to wall off the operative field, instead of dry ones, which injure the neuro-muscular mechanism of the gut wall. I agree with Vineberg that badly adherent and inflamed adnexa, especially on the left side when the sigmoid and rectum are involved, often, unless great precaution is taken in breaking up and separating adhesions to the

gut and mesentery, produce as a sequence symptoms of post-operative ileus. Kader has demonstrated that injuries to the mesentery produced severer symptoms than injuries to bowel wall alone. Preparation and post-operative care have received more than their share of the blame as causative factors in this condition of paralyticus intestinalis. Some operators purge their patients freely for days before the operation, and also give only a weak diet; others use scarcely any preparation other than a cathartic the night before and a liquid tray for supper. Some begin the use of calomel in 24 hours after operation, others wait nearly a week for indications for its use. Some feed slowly; others more rapidly. Some keep their patients in bed for two or three weeks; others get them up quickly. My opinion is that preparation and after care are almost nil as causative agents of atony. My method is, to give a cathartic the night before, liquid tray for supper, and a cup of broth early in the morning. If the cathartic has acted freely no enema is necessary; otherwise, a soapsuds enema is given, which easily clears the bowel in a short time. Most of my patients, unless there are special contraindications, receive a general tray at the end of a week. No cathartic is given for at least three or four days, unless otherwise indicated. I also allow all, except drainage cases, to get up and walk early. I find this method conducive to good results.

Many preventive measures for post-operative distention have been employed and found wanting. The latest preventive drawn to our attention is eserine salicylate. Since 1901, when Von Noorden published his monograph on the use of eserine, several investigators have been testing its merits and publishing their results. Among these are Offergald, K. Vogel, A. Oppenhein, Pankow, Arndt, and in this country, Elsberg and Vineberg of Mt. Sinai Hospital, New York.

Von Noorden used this remedy in several cases of meteorism and also reported good results in a case of obstruction. He praises it highly.

In 1904, Arndt described his experience with eserine as life saving. He says it is well tolerated by debilitated patients. Where he fails to receive prompt relief he also employs stomach lavage, especially when he suspects gastric atony, after use of the Trendelenberg position.

K. Vogel was the first to use eserine as a prophylactic. He gives the first injection before the patient leaves the table and gives subsequent doses if needed. He warns against using eserine after ileus has fully developed.

In the latter part of 1907, Vogel reviewed the literature on eserine and gave further experiences of its subcutaneous use as a peristaltic. Second operations on patients treated by this measure showed that the drug was effective in preventing the formation of adhesions. He believes it most useful and effective in cases of general and abdominal contusion. He usually gives a glycerine enema as an adjuvant to the eserine, the glycerine acting on the lower bowel only. Vogel does

not believe in too energetic purging before a laparotomy, but usually empties the bowels of old fecal matter two days before operation by means of castor oil, thus giving the bowel time to recover from any exhaustion.

Pankow reports his results of the prevention of post-operative intestinal paralysis by eserine as entirely negative.

Offergald suggests the use of eserine, nicotine and strychnine as prophylactics.

Vineberg, giving his own and Elsberg's experience with eserine at the American Gynecological meeting, 1907, said that, as a phophylactic it seems to be free from danger and worthy of an extended trial. Thus far, the evidences are in favor of its being of some value. It would seem to be of special value to counteract the probable paralyzing effect upon the intestine by the morphine which most patients need during the first few hours after laparotomy.

Dr. Rufus B. Hall, of Cincinnati, said at the Southern Surgical and Gynecological Association meeting, 1907, that eserine usually expelled the flatus in an average of 40 minutes. It failed to give results in only one case out of twenty in which he had used it during the previous two years.

About two years ago I began using eserine salicylate hypodermatically in cases of laparotomy, as a prophylactic against distention. I usually give the initial dose (gr. 1-40) immediately after the patient is returned to bed. Subsequent doses are given if occasion requires; but I have found this necessary in only four cases, two of which presented symptoms of slight infection. Like Vogel, I have often been required to use an enema to remove the flatus from the lower bowel. From his experience I believe, clinically, that the influence of eserine is exerted only on the small bowel. I have never seen any bad after effects from the employment of eserine and believe it can be used with impunity in proper cases. I have never used it in cases which came to operation with any marked degree of peritonitis, but have used it several times, successfully, in cases of appendicitis with slight peritonitic invasion. Have used it twice with success in cases of walled off appendiceal abscess, but not as a prophylactic.

In aseptic laparotomies it has worked as a charm, but has failed sometimes in those where infection was apparent. Flatus is usually moved in from one to four hours; by this I mean that it is either expelled spontaneously, or brought to the lower bowel where an enema soon relieves it. I have had no opportunity to see if it prevented adhesions, as Vogel claims and Ochsner denies. During the time that I have used this remedy, meteorism and distention have ceased to be a source of post-operative annoyance.

In two cases with severe meteorism my friend, Dr. H. E. Pearse, used a 500 candle-power leucodescent light to see if it would not help in easing the patients, with the result that the expulsion of gas began almost

immediately. This is in line with Gelinsky's theory of the use of superheated air in the after treatment of laparotomies. He applies it to the abdomen twice daily for twenty minutes. Its advantages he claims are the prevention of adhesions, promotion of absorption, and especially, the stimulation of peristalsis. Gelinsky is convinced that superheated air aids the peritoneum in its struggle against invading infection.

Conclusions: I. Eserine in the majority of cases moves the flatus.

II. Enemas are frequently needed as adjuvants.

III. It produces no bad after effects and can be used with impunity in proper cases.

IV. Where it fails to produce good results, infection likely has gained a foot-hold.

V. In aseptic laparotomies it undoubtedly acts as a prophylactic against atony.

VI. It causes expulsion of flatus in from one to four hours.

VII. According to Vogel it prevents adhesions.

VIII. Gelinsky's method is worthy of further trial and study.

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A Doctor in the Arctic.—Dr. James F. Rymer will shortly gain the distinction of being the first qualified British medical man to take up his residence in the Arctic Circle. After serving eight years as medical officer at the Carthusian Monastery in Sussex, Dr. Rymer went to Canada and for the past six months has lived at Edmonton, Alberta. Recently he left there on a lonely journey of 1,800 miles along the Athabasca and Mackenzie rivers, his destination being Fort Good Hope, which is about 100 miles within the Arctic Circle. He does not propose to return to civilization for at least three years. He has sufficient medicine in concentrated forms to last at least one year and has arranged for more to be forwarded. His patients will be the Indians and Esquimaux in the vicinity of Fort Good Hope and Fort Macpherson. Several diseases and fevers often break out among them, and, as they have no skilled attention, the loss of life has been enormous. The doctor can speak French, which is the only language other than their own which the Indians understand, and intends to start the study of the languages of the Indians and Esquimaux directly he arrives. At his headquarters he will not have more than five white companions, these being connected with a Roman Catholic mission and trading post.—(London Letter, Journal A. M. A.)

INFECTIONS OF THE KNEE-JOINT AND TREATMENT.*

BY WALTER C. G. KIRCHNER, M. D., OF ST. LOUIS.

The subject of infections of the knee-joint is a broad one, and a consideration of the condition in all its phases would require more time than is at our disposal. The condition may readily become so serious that the importance of prompt and efficient treatment should be recognized. In many cases, the infection is permitted to advance until amputation seems the last resort. We wish to consider the treatment of infection of the knee-joint in a more conservative manner, so that a cure may be effected without sacrificing the extremity.

The knee-joint is most often infected by penetration or injury in which bacteria are carried either directly into the joint cavity or secondarily through extension of infection of bursae or of tissue surrounding the joint. Injuries caused by nails, bullets, by scratches or lacerations of the knee are most frequent. Contusions and compound fractures may also be a cause of infection, and when associated with fracture the danger is very great. The infection is sometimes carried by the blood to the joint, and the joint may become involved in cases of osteomyelitis. Tuberculosis, gonorrheal synovitis, rheumatism, syphilis, tumors, etc., cannot be taken up at this time.

The diagnosis of the true condition is very important, for upon the nature of the trouble will depend the treatment. At times it is very difficult to understand the true condition. Acute infection of the joint is so often mistaken for tuberculosis and especially for rheumatism that the knee-joint is sometimes completely destroyed before the real condition is recognized.

Gonorrheal arthritis, chronic synovitis and osteomyelitis are conditions that should be carefully considered in our diagnosis of the trouble.

Acute infections of the knee-joint are so serious that the prognosis is usually grave. After a more or less sudden onset, which is accompanied by fever, if left to itself a septic course ensues with great damage to tissue. When the pus is in the joint and is under pressure, there is great pain; but this is much less when the pressure is relieved, either by opening the cavity or when the pus extravasates or burrows into the surrounding tissue. Pus about the knee-joint may burrow in many directions and the involvement may become very extensive. The pus may be confined to the bursae or to the joint-cavity itself. If the pus is allowed to remain, the synovial membrane is likely to be attacked and necrosis of bones and osteomyelitis may result.

*Read in the Surgical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

The ligaments may soften and become eroded, and there may be a complete luxation or in the young separation at the epihysis. There may be multiple metastatic abscesses, and the process may cause phlebitis involving the pelvic veins and of the veins of the opposite leg. In hospital work, I have had occasion to see all these complications and many unfortunate results could have been avoided had the real condition been earlier recognized. The nature and severity of the trouble is greatly dependent upon the character of the infecting organisms.

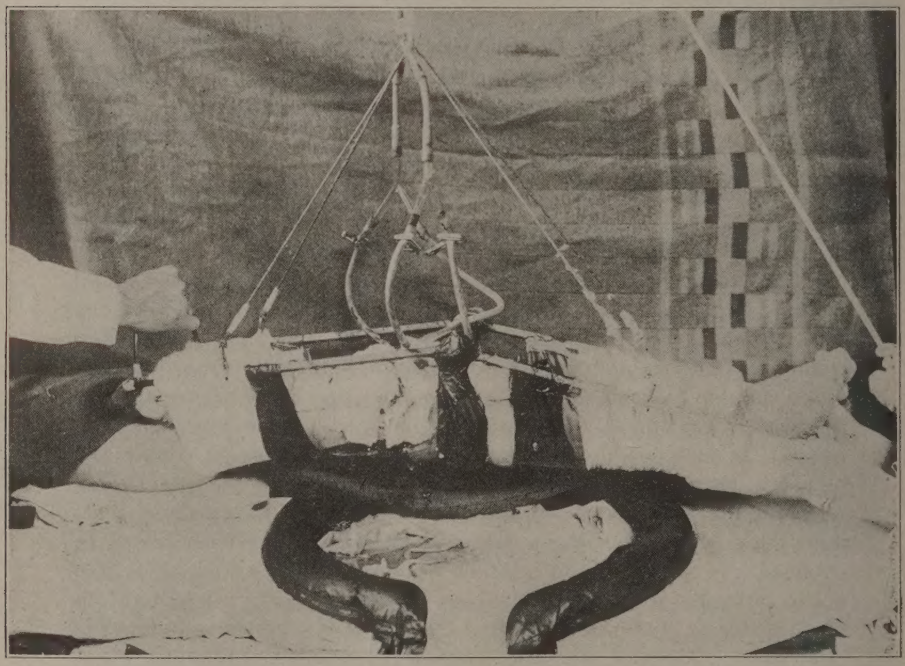
From the standpoint of treatment, it is most important to bear in mind the anatomical relations. The bones of the knee-joint are firmly bound together, and held in place by the ligaments, capsule and tendons. The tissues about the joint are resistant and are very tense. In the treatment, the size, shape, and location of the bursae should be remembered, for they are often connected with the joint-cavity and their importance as receptacles for infectious material should not be lost sight of. The posterior or popliteal fascia is also of importance for consideration, and because of its position and resistance infection or pus may be encouraged to travel up the thigh or down the leg. An understanding of these relations is most important in the establishment of satisfactory drainage of the knee-joint and the regions surrounding it.

The treatment of infection in the knee-joint or near the knee-joint depends largely upon the character and mode of infection and severity of the trouble. Where infection is carried to the joint through the blood stream, the diagnosis at times is very difficult, and the nature of the condition can only be made out by direct examination of the contents of the joint-cavity or bursae. Exploratory puncture furnishes an excellent means. In making this puncture, it is best first to incise the skin and to use a rather large needle or trocar. Small aspirating needles are often unsatisfactory because on account of the contents, which at times is so thick or of a gelatinous nature, a satisfactory specimen cannot be obtained. In puncture and gunshot wounds about the joint, it is best not to probe the wound, for this may only tend to carry infection. It is much better to enlarge the opening by incision so that free drainage is established. Modified dressing, consisting of moist, antiseptic gauze and dry absorbent cotton, will be found very useful in the preliminary treatment of these conditions.

If the patient is running a septic course, or if the condition has been ushered in by chill and fever, and there is pus in the knee-joint, radical measures should be pursued to relieve the joint of further complications. Mere puncture and small incisions for the sake of drainage, as a rule, accomplish little. If the infection has not advanced very far and if the pus is still located at the upper portion of the joint, long incisions on either side of the patella with through and through drainage may bring about a good result. This procedure, however, is only to be recommended in the earlier stages of infection, where thorough drainage can thus be established. If the patient's condition is not at once relieved

by this operation, or if the accumulation of pus demands more complete drainage, free incision should be made on either side of the knee and across the patella tendon so that by lifting up the flap which contains the knee cap, the entire joint may be exposed.

In most cases, the bursae themselves contain large quantities of pus. The prepatellar bursa should be opened, drained and packed. The large suprapatellar bursa should be thoroughly opened up and drained. All pus cavities should be followed up with the finger, and counter and through and through drainage established by means of rubber tubes.



As a rule, it is best to have an opening in the popliteal space to prevent burrowing of pus, and, unless the joint cavity has dependent drainage, it is difficult to free it from pus accumulation.

In establishing drainage, hemorrhage can be avoided by introducing forceps or scissors, and by means of blunt dissection and separation of the blades, an opening can be made so that drainage can be established. This method is particularly of service in making an opening through the popliteal space where there is danger of injuring important nerves and vessels.

All cavities and bursae having been thoroughly opened up and dependent drainage established by means of rubber tube, the extremity

should be so immobilized that subsequent dressings can be properly attended to.

In the cavities thus drained, there is a tendency to the reformation of pus, and unless great care is exercised the process is likely to extend and pockets of pus will re-form. It is important, therefore, to avoid this condition and by means of continuous irrigation, constant drainage of the wounds is brought about and there is opportunity for the formation of healthy granulation tissue.

In our experience, we have had good results in the method of continuous irrigation, and extremities which, otherwise would have been sacrificed, have been saved. In carrying out the method of continuous irrigation of the knee-joint, a number of conditions are at once encountered. It is important that the patient be placed in a comfortable bed, and it is desirable that the mattress have a section removed on the side of the injured extremity for convenience when dressings are made. The extremity may be placed on a posterior, or a Cabot splint, or in a Hodgen splint so modified that the wound may be easily dressed and that the limb rests in the splint as if it were in a hammock. This latter method gives the patient greatest comfort, allows change of position in bed, and the use of bed pan, and permits hygienic measures to be more easily carried out.

Plaster casts with windows have been used, but are of service only when the infection is limited and is well under control. In the earlier stages of treatment, a cast will prevent a thorough examination of the extremity, and progress of infection cannot be ascertained.

For continuous irrigation, a number of nozzles with properly arranged stopcocks should be employed, and the saline solution should be permitted to thoroughly irrigate all parts of the knee-joint. Great care should be taken to protect the synovial membrane, for there is danger of necrosis when exposed. The aim should be to encourage the formation of granulation tissue as quickly as possible, and thus to obliterate and fill in all pus pockets. The tubes should be replaced by bundles of silk-worm gut, and, as the healing progresses, each day a few strands should be removed until the sinus is completely filled in. All tubes and drains should be removed from above downward, so that the dependent portion is the last to heal. The continuous drainage having been discontinued, and healthy granulations having been established, the extremity may be placed on a posterior splint so arranged that daily dressings can be made.

The accompanying photograph shows a method of continuous irrigation that has been used with success in the treatment of these conditions.

The treatment of this condition requires a great deal of patience and judgment, and the patient's general condition must be carefully looked after. With good drainage, good food and plenty of fresh air, satisfactory results may be expected.

In two of the cases thus treated, ankylosis of the joint, which was anticipated, did not take place, the results, therefore, being most gratifying. For those who have patience and judgment, and who wish to use conservative measures in the treatment of infections of the knee-joint, this method may be of some service.

DISCUSSION.

Dr. John D. Seba, Bland: The knee-joint is of special interest to me since I have had several bad knees. I have learned a few things, and one is, that whenever you have an infected knee-joint and you cannot make it any worse you had better open it up and see what is going on. The fact is too many of us simply depend upon nature to heal. I have seen knee-joints that could not be made worse by operation. By operating and letting out the pus and serum and draining and using massage, even if you have to do it under chloroform, you will often have a good joint, where otherwise you would have a stiff one.

Dr. Kirchner, in closing: The speaker brought out exactly the point I wish to make, that in these cases it is a great deal better to open up the cavity of the joint and see what is going on than to allow the pus to destroy the knee.

The Crusade Against Tuberculosis in Ireland.—The crusade against tuberculosis in Ireland has been described in previous letters. The most important step was the founding by Lady Aberdeen, in 1907, of the Women's National Health Association to arouse the women of Ireland to the fact that each year almost 12,000 of the people die of consumption. She organized the tuberculosis exhibition and its success was so great that when the time came for it to start on a tour through Ireland so many towns asked for it that two exhibitions had to be prepared—one for going north and the other south. Up to the present these exhibitions have visited 60 towns and over 700,000 people have attended them—about one-sixth of the population of Ireland. The question may be asked, will all this produce any lasting benefit? Already it has done so. In Dublin a system of home nursing for consumptives has been introduced by means of the coöperation of the medical staffs of the hospitals and the Women's National Health Association. Many other towns are following this example. In consequence of the educative effect of the exhibitions guardians of the poor and urban councils are putting up chalets, sheds, etc., in which tuberculous patients can be treated. These sheds are inexpensive, and being erected on the grounds of the hospitals, their cost of keeping is small.—(From London Letter, Journal A. M. A.).

PROPHYLAXIS OF FATTY DEGENERATION OF THE HEART MUSCLE.*

BY B. H. ZWART, M. D., KANSAS CITY, MO.

There is none to gainsay the importance of the prophylaxis of fatty heart, none, I believe, who would deny the meagerness of literature concerning it, and none who has not felt his helplessness when dealing with an advanced degeneration. Do we not, perhaps, permit fear and a sense of helplessness to be a barrier to putting forth our best efforts in staying the ravages of an oncoming degeneration? For one I say aye, and whilst I have nothing new to offer, if what I shall say arouses within you an optimism in regard to its prevention and treatment, my labors and your patience and attention shall have been rewarded.

Optimism? Yes, truly; for I am an optimist in the treatment of incipient disease, a hopeful and determined adversary to advanced conditions, and one who believes in marshaling every reserve, be it medicinal, mechanical or otherwise, that can aid the resourceful physician when death stands ready to claim another victory.

I believe that myocardial degeneration is a more common condition than is generally supposed. I believe that we too often overlook its stealthy approach, and I believe that these errors of omission are ofttimes inexcusable in the light of our present day knowledge. This is not as it should be, for we are guilty of a wrong when we permit, through carelessness, a condition so amenable to treatment, to eventuate in one which resists every known method of cure.

I am not a heretic when I say amenable to treatment, for I know men who have had fatty hearts who now have hearts that are normal, at least to the extent that no abnormality can be diagnosed; men whose careers of usefulness seemed to have ended who now are men of affairs, men in whose hands are entrusted the fortunes of astute business men. Far be it from me to aver that a heart whose floodgates have been irreparably damaged, one in which nutrition has for years performed the herculean task of increasing the strength and size of the heart muscle that it may meet ever-increasing requirements, can be restored to the normal; no, Samson-like, its strength may for a time return, goaded on it may fill vessels, for a long time emptied, but this desparate effort must soon end in stillness, for even the masterpiece of the Creator is amenable to the laws of nature, and dust to dust shall ever return. But this is no cause for disouragement, for there is much we can do and if the surgeon extends the span of life by respecting the laws of nature,

*Read in the Medical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

we, too, should add to the sum total of human happiness if we correctly interpret these laws.

That we may successfully treat disease we should study the cause, and this applies more particularly to prophylaxis. Given the cause, intelligent directions may avert threatened disaster. Fatty heart means but little to him who would better the condition of fellow man; of more value is it to know that some toxin disturbs the organism or that mayhap a mechanical fault exhausts nature's powers. Of prime importance is it to remember that fatty heart steals upon us clothed in the garb of many diseases. We are too prone to pronounce normal that heart which presents no evidence of valvular disease, and to forget that infectious diseases, chemicals and autointoxications, as well as mechanical agencies, may involve the myocardium without first involving the serous structures. True endo- and pericardial inflammations may affect the muscles by extension of the inflammatory process as well as on account of the mechanical influences, and the resulting myocarditis ends in a fatty degeneration just as certainly as does a primary myocarditis.

So long as the myocardium receives normal blood its integrity is maintained in face of a considerable coronary degeneration, or other cardiac disease. A vitiated blood just as surely quickly brings disaster. We know little of the vitiation of the blood by autointoxication and perhaps less of this vitiated blood as a causative factor in disease, nor why, in one of a pair of otherwise similar cases, it causes an irritable heart and in the other a flabby cardiac musculature unresponsive to stimulants, but the fact remains that the myocardium *is* affected, by what, in our imperfect knowledge, we term autointoxication. Neither is it necessary that to have an autointoxication we must have a gastrointestinal symptomatology, for we may have it dependent upon failure of function in any organ concerned in the complex function of metabolism. The muscle itself may aid in the autointoxication, as, for instance, in the retrograde process affecting an hypertrophied heart. Here is a muscle which in response to the law of supply and demand has increased in strength and bulk until the increased demand ceases or supply can no longer respond to demand; in either instance the equilibrium is no longer maintained and supply being deficient the hypertrophy becomes superfluous and must be removed. The excess of musculature invites a fatty degeneration and the degenerative process tends to autointoxication.

Such a heart we find in the athlete who no longer keeps up his unremitting exercise or in the laborer, who, having gained a competency, seeks ease and comfort in his declining years, or who has an hypertrophied heart and must perchance undergo an operation. The enforced rest, coupled perhaps with the effect of the anesthetic on the heart muscle, makes the hypertrophy unnecessary and the degeneration begins and continues till judicious treatment stays it or compensation ruptures.

Uremic poisoning, anxiety, fear, shock, neurasthenia, another name for autointoxication, are causative factors we must at times deal with and

alcohol and nicotine in different ways often demand attention. The saddest cases we meet are those jolly, whole-souled, fat fellows whose mission on earth seems to be to have fun and radiate happiness, who come to us with the story of heart hurry or distress after slight effort.

In these a fatty infiltration is increasing the bulk of the heart and lessening its power; thus handicapped, they more and more avoid physical effort and all too soon pressure brings on degeneration. Saddest I say, because we can ill afford to consign to an early grave those who add to the joys of their fellow man, and because these curable cases are often overlooked. These *are* curable cases and we are guilty of a crime do we not recognize them early.

These few thoughts on the causation must suffice, but it must not be forgotten that almost any departure from health continuing for a considerable time may favor the development of this condition, and that the permanency or transitory nature of fatty degeneration depends more upon the duration of the infecting process or mechanical interference than upon any other of its phases, and for this reason we should ever be on the alert to detect, and if possible, correct, such departure from the normal.

In this age, it is incorrect to say that a positive diagnosis is impossible; the physical signs alone are sufficient to diagnose, and, in conjunction with the subjective symptoms, are easily interpreted, but we should not wait for a positive diagnosis to begin prophylactic measures; better is it to condemn to treatment such hearts as arouse in the mind of the competent man a suspicion of its presence, and to remember that anything which disturbs nutrition for a considerable period of time is more than apt to damage the heart muscle. Ordinary care is all sufficient in the most of these cases and with them we need not deal.

When, however, nature seems unable to cope with the condition, active measures are indicated.

It is manifestly impossible to consider the detail treatment of a condition with so varied a causation, but grossly stated it means: (a). Suggestion. (b). Removal or modification of the cause. (c). Improvement of nutrition. (d). Exercise. (e). Rest. (f). Medicinal.

Suspects should be placed in active training just as thoroughly as is the athlete preparing for a meet. To this end the importance of the treatment must be placed before the patient in such a manner as to arouse his enthusiasm; a prize must be hung up to stimulate him to his greatest endeavor; suggestion is a powerful means and that the physician may suggest profitably he must himself be enthusiastic.

Patient and physician must make a business of treatment; for either to enter upon it in a half-hearted way invites inevitable failure.

Keep prominently before the patient the goal and the reward, and if at any time these do not appeal to him as being worth the effort, give him to understand you are not willing to continue. To my mind enthusiasm and earnestness are as essential on the part of the physician as on the part of the patient, and suggestion of improvement is a *sine qua*

non. In this we are often wanting in our efforts. The patient should be given to understand that zeal alone can accomplish aught and I frequently impose a placebo, as it were, by requiring a self-denial not absolutely necessary. The mental placebo accomplishes as much as does the medicinal and is a potent means to the end.

We cannot enter into the consideration of the treatment of the cause. It goes without saying that this varies according to whether an inflammatory cardiac disease, an infectious disease, a toxic condition, or a fatty infiltration is the precurser, but whatever the cause it is all important and must be vigorously attacked.

The improvement of nutrition suggests the care of the digestive apparatus, correction of fermentation and the dietary, for it matters much whether nutrition is above or below normal. Habits nearly always need to be corrected and occupation may have an important bearing. The medicinal treatment is mainly concerned with this part of the treatment, though other considerations, such as blood pressure, etc., enter into it.

Given, then, a case which resists ordinary treatment, or which does not yield to the treatment thus far given, we must add those more potent means now to be outlined. Every phase of the case is to be studied, frequent observation is insisted upon, habits are more clearly examined into and corrected, hours of rest and play are prescribed, and the patient is carefully instructed as to exercise—he is placed on the training table. The patient is required to retire at 10 p. m. and to waken at 6 a. m. He is instructed to lie awake 10 or 15 minutes before arising that the weakened muscle may have time to adjust the circulatory equilibrium, after which 15 minutes are devoted to exercise of every muscle by resisted movements.

Minute instructions are given as to these movements, which become more vigorous as the heart improves, though always slowly made, and of greatest importance is it that the difference between exercise and violence be realized, for violence is potent for great harm.

After exercise a drink of cool water with perhaps a stimulant, and then the bath. The temperature of the water should be such as to be agreeable to the individual, with friction and resisted movements whilst in the tub, followed by massage for 15 minutes. After massage, 15 minutes of rest, mental and physical, and then robing for the day. The clothing should be light in weight and adjusted to meet the varying requirements of the thermometer and barometer.

Nothing should be worn which restricts the circulation; hose supporters encircling the legs are tabooed, loose neck bands and waist bands are required,—in a word, comfort and freedom of movement are sought for.

Having robed for the day the patient is eager for breakfast, which should be one of the best meals of the day, and like all other meals, is to conform to the prescribed dietary. After breakfast rest, with a clear Havana if it conduces to comfort and has not been interdicted. Of importance is it that the cigar should be free of adulteration, for nicotine

is poisonous enough without adding other irritants. Having rested, a walk in the open air, brisk or otherwise, but always with the idea of exercising, is indulged in and regulated as to length by the power of endurance of the patient. A rest after the walk prepares the patient for the labors of the day and if 15 minutes periods of rest in the recumbent position can be stolen from the hours of toil, all the better, but at all events during these hours restricted movements are advised unless the character of work is such as to make them unnecessary. The patient is told to get as much sunshine as possible and if the grand luminary is wasting his influence behind the clouds, he himself must furnish the sunshine. He must be optimistic at all times and entertain none but happy thoughts, for it has well been said, "we live as we think." Thus the entire day is allotted in hours of work and play, but always rest after exercise and meals. He is warned against anxiety, worry and hurry, and must be taught to see and enjoy the joys of nature, for after all no joys are so great as those furnished by nature, free of the artifice and glamor of the joys made by man. In seeking pleasure or wealth he must avoid frenzy and yet drink deep at the fountain.

The day being spent, 15 minutes are again given to resisted movements, 15 minutes to cool sponging and massage, and then health-restoring sleep.

I do not believe that too much sleep furthers the welfare of the patient and I prescribe eight hours, for remember we are dealing with incipient lesions not with hearts no longer able to perform their function.

You may say the regimen is rigorous, but I say to you the prize is worthy of it. To accomplish much we must demand much and after a short while the patient becomes fascinated with the treatment and must often be restrained lest in his eagerness he substitute violence for exercise.

The punching bag, the dumb bell, weights and sprinting have no place in his treatment, but always slow, studied and restricted movements.

With such treatment I have seen restored to health and ready again to take up the burdens of life with joy, men who had felt that their race was run. I have seen high arterial tension lowered and a low one raised, a weakened and shortened heart sound made normal, a blanched cheek freshened till it glowed again with the life current so in contrast with the ashy pallor. And I have seen the halting step changed to the sprightliness of youth.

Pathologists have told me naught can stay the progress of a degeneration once begun and I am willing to subscribe to this view, as they see it, for my enthusiasm has never emboldened me to attempt a cure after they had demonstrated the presence.

DISCUSSION.

Dr. C. A. Good, St. Joseph: We must all recognize at the outset that these people don't consult the physician early. As to the etiology, not much has been added for several years and there will not be much

added until our knowledge of physiology and pathological chemistry is more advanced. Many of us could make an earlier diagnosis if we paid sufficient attention to our patients and noted the physical signs. I know that I am sometimes unable to tell whether a heart is competent or not, but by taking the blood pressure before and after moderate exercise the result is often enough to put me on my guard. The treatment of this condition cannot be separated from the treatment of the patient as a whole. The essayist's treatment is admirable, but his method applies to the individual as a whole and not in particular to the heart. Myocardial degeneration is often accompanied by a general lack of tone. The greatest difficulty I have encountered is to get these people in time to do anything with them, and even after they consult a physician they sometimes object to having anything done for them.

Dr. Franklin E. Murphy, Kansas City: It appears that there are certain penalties to be paid for advanced civilization and myocardial degeneration is one of the penalties an increasing number pay. As we are inclined to estimate a man by his business success every man struggles for its attainment, and many men from the strenuous life are prone to suffer from diseased blood vessels.

I am sure Dr. Zwart is right. Optimism should prevail. The patient should be reassured and be made tranquil. Any emotional disturbance will damage the diseased heart. The patient with heart disease has digestive disturbance and the disordered stomach aggravates directly and indirectly the condition of the heart. Dr. Zwart has stated that the disturbance of function of any organ concerned in body metabolism may give autointoxication. The thyroid is doubtless an organ concerned in body metabolism and in diseases of this gland we observe most pronounced symptoms of disturbed metabolism and symptoms of circulatory disturbance. It has been shown that the continued use of tobacco will result in not only functional disturbance of the heart but in organic changes in the heart. As to the influence of alcohol in the production of arteriosclerosis, I recall the report of Dr. Cabot, who has satisfied himself that alcohol alone does not nearly play the part in arteriosclerosis we have thought; tobacco on the other hand plays a much more important part.

Dr. Zwart, in closing: It goes without saying that if we do not see our patients in the incipiency of the disease we do not give them prophylactic treatment. But how many of us watch our patients long enough after typhoid fever, as an example, to be sure that no myocardial degeneration has set up? Of course the individual must be treated, for there is no hope of improving the heart's muscle without the general improvement of the patient. The patient must think happily and live happily if he hopes for improvement. In our instructions we must differentiate minutely between exercise and violence, for violence is potent for harm.

THE ROENTGEN RAY AS AN AID TO THE DIAGNOSIS OF TUBERCULOSIS OF THE LUNGS, WITH DEMONSTRATION OF SKIAGRAMS AND NEW ORTHODIASCOPE.*

By William Engelbach, M. D., and R. D. Carman, M. D., of Saint Louis, Missouri.

The value of the Roentgen ray as an aid to the diagnosis of pulmonary tuberculosis is not generally recognized. In fact, it has only been during the last few years that the rapid development of technical roentgenology has made its application of practical value in the diagnosis of tubercular and other pulmonary diseases.

Outside of the organs contained in the mediastinum, the normally air-filled lung and vacuum pleura are very pervious to these rays, and therefore gives a shadowless skiagraph. Tuberculosis, as well as other diseases of the lung, causes more or less structural change either increasing or decreasing the air-contents of the lung, thereby producing a variation of the normal density of these tissues. The gradual perfection of technique enables the expert roentgenologist to show an exquisitely fine differentiation of approximated tissues varying even to the slightest degree in density. These lesions, therefore, causing sufficient variation in density from the normal, can now be demonstrated by the skiagraph and fluoroscopic screen. Whether roentgenology can give a positive interpretation of the etiology and the pathology of those lesions which it is able to define and locate is yet an open question. That tubercular shadows have more or less definite characteristics, however, will be demonstrated later. Besides these shadow findings, skiagraphy is able to demonstrate very accurately any abnormality in the movement of the chest and in the change in the shape, size and position of its organs. This evidence in itself has only an indirect bearing upon the diagnosis of tuberculosis, and is helpful as a secondary sign indicating some primary tubercular lesion which in itself may not be demonstrable with the x rays.

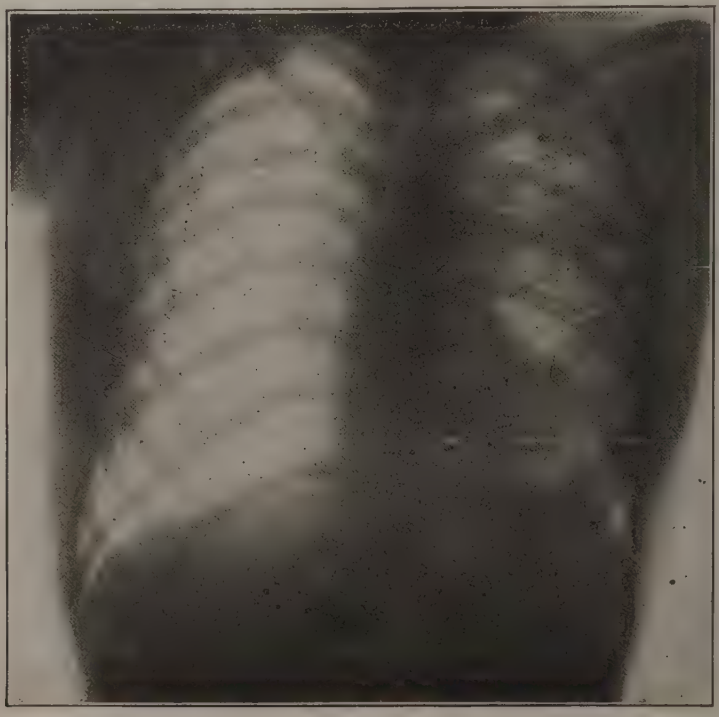
The importance of the proper interpretation of the x ray findings in these conditions is of necessity absolutely essential. The technique must be expert and obtained with the most improved modern equipment; for instance, the picture must be made in the shortest possible time, i. e., one to five seconds, etc. These skiagrams, perhaps more than any other, require years of experience and close application of controlled diagnosis for their proper interpretation.

In giving the following summary of this application of skiagraphy, with the demonstration of skiagrams of these conditions we make no claim for originality, but merely attempt to select from the works of Holzknecht, Shoenberg, Kassabian, Rosenthal, Hickey, Willey, and others,

*Read in the Medical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

Bilateral infiltration second stage tuberculosis.
(Radiograph by Vernon J. Willey.)

1. Entire right lung, diffuse infiltration. 2. Infiltration of the entire left upper. 3. Early infiltration.



Second stage tuberculosis. (Radiograph by Vernon J. Willey.)

1. Pneumothorax with depression of diaphragm and displacement of heart to the left. 2. Diffuse infiltration of entire left lung. 3. Heart shadow indefinite on account of infiltration in the left lung.

some of the important principles of their art which are of practical value at least as confirmatory evidence in the diagnosis of tubercular conditions. In this summary the findings of fluoroscopy, skiagraphy and orthodiagraphy will be given without special mention of the technique or methods used.

Tuberculosis of the Pleura. On account of the large percentage of diseases of the pleura being tubercular in origin, and the frequent association of these diseases with pulmonary tuberculosis, they are considered an appropriate part of this article. Abnormal collections of free fluid or air in the chest cavity produce such a marked change in its density as to be very easily observed with the fluoroscopic screen or skiagraph. Pleurisy with effusion, although readily diagnosed by ordinary physical findings, is sometimes, when encapsulated or intralobular, difficult to differentiate from plastic pleurisy, lesions of the lung, displacement of abdominal organs, etc. Large effusions also often present the signs of complete consolidation of the lung with or without an obstructed bronchus, and are also frequently mistaken for a diffusely thickened pleura, or vice versa. These conditions are easily differentiated by a simple fluoroscopic examination. The x ray shadow of an effusion of the chest is denser than that produced by any other thoracic condition. This shadow is of an even, diffuse, dense opacity, and has, when the fluid is not too large or encapsulated, the hydrostatic properties of seeking its own level. The rib shadows are less distinct than on the opposite side. When the effusion is at the base of the lung it usually obliterates the shadow of the diaphragm and fuses with the shadow of any adjacent solid organ. The compressed atelectatic lung tissue above the effusion is denser than the corresponding normal lung of the other side. Displacement of the heart shadow takes place more markedly when the fluid is on the left side. This displacement, however, is one of the entire mediastinum with no marked abnormal relationship of the base to the apex of the heart. The movements of the diaphragm are restricted, depending upon the amount of the fluid. In contrast with these skiagraphic findings a thickened pleura produces a shadow of only a very slight veiling of the effected side, depending upon the extent of the lesion. This shadow is irregular in outline, very unequal in opacity, and without the slightest mobility. The ribs are closer together, the pleural cavity is decreased in size, and curvature of the spine and decreased movement is usually present in old contracture. Empyema gives findings very similar to pleurisy with effusion. There is usually more marked displacement of organs, and sometimes diffuse undulations or pulsations are observed with the fluoroscope. Kassabian says the shadow is the same as that of effusion except when edema of the chest wall accompanies the empyema which increases the opacity. It is, therefore, questionable whether differential diagnosis can be made between the pleurisy with effusion (serous, serofibrinous or hemorrhagic) empyema, hydrothorax, hemothorax, etc. In intra-lobular empyema, a

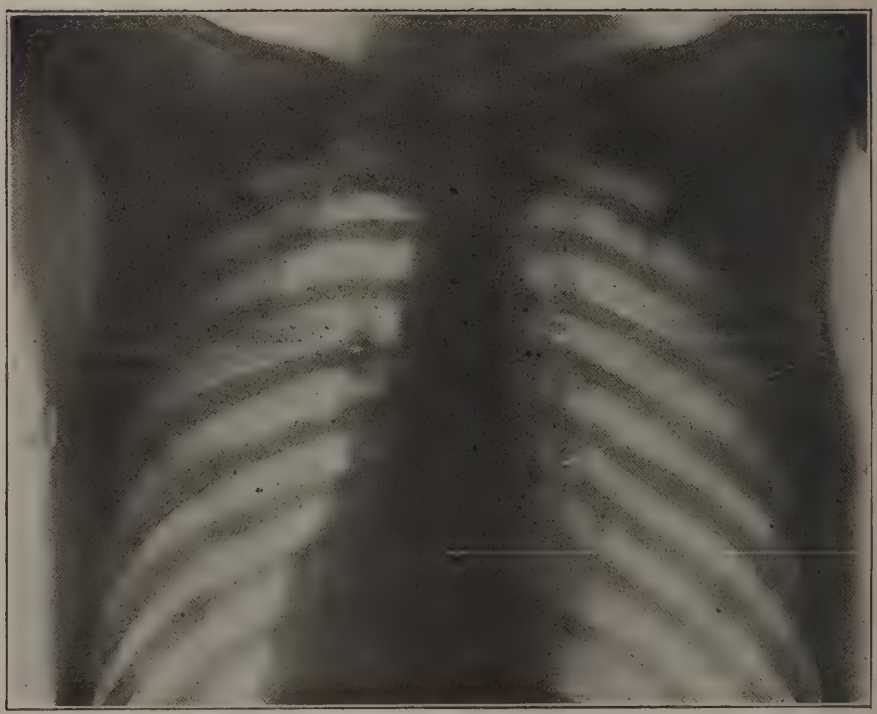
Small cavity in the base of the right upper lobe.
1. Cavity partly filled. 2. Cavity wall.

Cavity in the right upper apex.
1. Empty cavity. 2. Cavity wall. 3. Heart shadow. 4. Beginning infiltration.

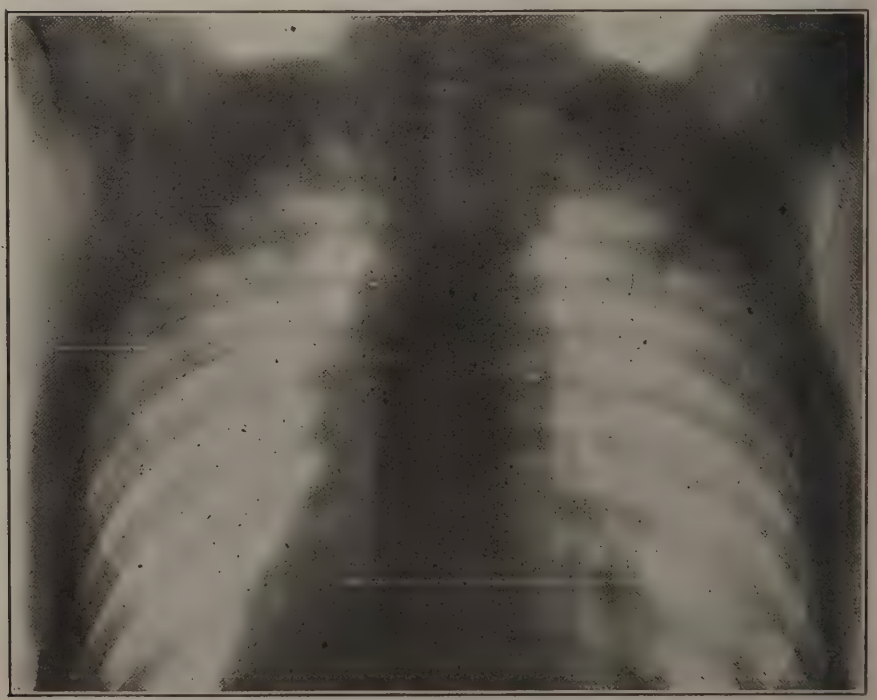
localized shadow corresponding to the intra-lobular fissure is presented. Differentiation of this condition from encysted empyema, cavity or abscess of the lung, is sometimes difficult by the skiagraph alone. There is no marked displacement of organs in the localized empyema, and it is rarely surrounded by a darker margin as is abscess or cavity of the lung. Diaphragmatic pleurisy produces a localized shadow at the base of the lung which obliterates that of the diaphragm, and consequently diaphragmatic movement is almost completely restricted. Subphrenic abscess causes a displacement upward of a motionless diaphragm, and usually some displacement of the heart, with the adjacent lung tissue above the diaphragm darker than normal. Sometimes the upper level of the shadow below the diaphragm is mobile on shaking the patient.

In pneumothorax the majority of cases of which are tubercular the skiagraph is a perfectly clear space of an enlarged half of the chest showing only the ribs in marked contrast with a light shadow caused by the air within the pleural cavity. In the upper internal angle of the affected side there is a shadow darker than the corresponding lung of the opposite side, which is cast by the retracted collapsed lung. The diaphragm is in a low position, its movements are greatly restricted or absent, and the mediastinum is usually displaced towards the non-affected side. The heart is usually markedly displaced and produces a very clear cut dark shadow on account of the contrast of the air-filled pleura. In hydro- and pyo-pneumothorax there are three different shadows on the effected side. The collapsed lung is shown by the upper internal shadow of a dark, hazy nature, sometimes containing a more solid dark tubercular area. Beneath this is a bright space produced by free air in the pleural cavity, and at the base of the thorax there is a dark uniform fluid shadow having hydrostatic properties and sometimes pulsating. Movements of the diaphragm are usually obliterated, and the displacement of organs is the same as observed in pneumothorax.

Tuberculosis of the Lungs. Second and third stages of tuberculosis of the lung produce very positive skiagrams. Cavities are usually very easily diagnosticated. An empty cavity produces a lighter area surrounded by a dark margin. Filled cavities give the same findings as consolidated areas, that of an irregular dark shadow. This dark area, however, usually becomes lighter after the patient is induced to empty the cavity by coughing, change of position, etc. This latter change of opacity differentiates it from an infiltration of the lung, tumors, cysts, encapsulated empyema, etc. A dilated bronchus surrounded by an infiltrated margin is frequently impossible to differentiate from a cavity, although its shape, form and number is a help in drawing conclusions. The findings in gangrene and abscess are practically the same as those of cavities, but are easily differentiated by the other methods. The x ray findings in these conditions producing cavity formation are of importance on account of accurately demonstrating their size, number and location.



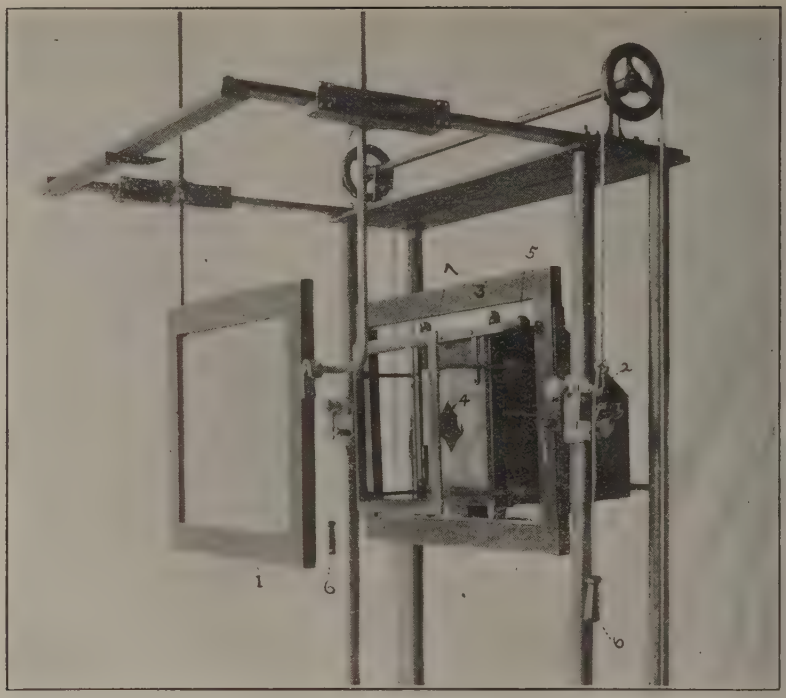
Tubercular (?) lymphadenitis. Lungs normal.
1. Calcified lymph gland. 2. Parabronchial thickening. 3. Heart shadow.



Aneurysm.
1. Normal lung tissue. 2. Aneurysm of the descending thoracic aorta.
3. Arch of the aorta. 4. Heart shadow.

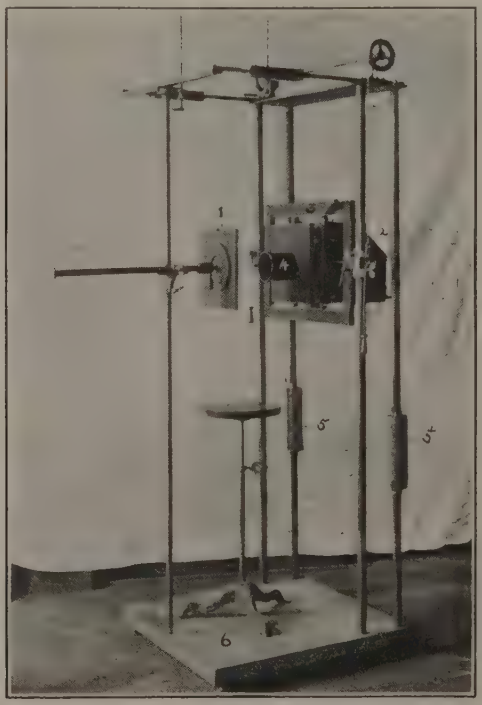
Second stage tuberculosis consisting of infiltration or consolidation with or without beginning cavity formation is also very easily diagnosticated by this means. The shadows produced by these lesions are more or less diffuse shadows having a marked variation in opacity, depending upon the amount and density of the lung tissue involved. They are characterized by their non-uniform opacity. In contrast with the shadow produced by consolidation of pneumonia, which is a lobar, uniform homogeneous shadow, these shadows vary considerably, presenting a more or less unequal, spotted appearance within a lighter shadow. They are usually located at the apices, not limited to a lobe, non-mobile in character, remain constant after expectoration, change of position, etc., are not as densely dark as a fluid shadow, but are much deeper in color than that of an adhesive pleurisy. They are differentiated from infarcts by being more irregular in density and shape, and not located at the periphery of the lung. They differ from atelectetic areas by not disappearing after coughing and forcible breathing. Other conditions such as tumors, cysts, echinococcus, actinomycosis, and blastomycetis of the lung produce circumscribed areas varying in opacity, which are difficult to differentiate from tubercular shadows by the skiagram alone. Malignant growths frequently pulsate in one direction, which is exceptional with tubercular consolidation. Aneurysms are easily differentiated by the expansile pulsation in more than one direction. We have found that in this stage of tuberculosis the x rays have given a more accurate diagnosis of the extent of the lesion than physical examination.

First Stage Tuberculosis. The earliest tubercular shadows demonstrable by the x rays are small, hazy, darkened spots, depending for their distribution upon the extent of the lesion. Multiple lesions show a mottled appearance of the affected lung. In comparing the physical with the radioscopic findings of incipient tuberculosis (cases upon which no positive findings could be demonstrated), Dr. Carman and myself have found the skiagrams very helpful. We believe in the very earliest cases that it is impossible to make a positive diagnosis upon the skiagraphic findings alone, but the characteristic x ray findings taken with the suspect physical and clinical findings warrant a positive diagnosis in a majority of these incipient cases. The non-tubercular conditions which might possibly produce either suspect, physical, clinical or x ray findings are usually excluded by a combination of these findings. Other conditions which usually give confusing x ray pictures simulating incipient tuberculosis are interstitial pneumonitis, beginning bronchiectasis, atelectasis and anthrychosis. The normal thorax usually gives a chain of small shadows along each side of the sternum which are produced by para-bronchial glands, bronchi and blood-vessels. These shadows are frequently mistaken for tubercular shadows in the lungs. From these shadows there frequently radiate streaked, fading lighter opacities, which have been considered the findings of para-bronchial pleural



New Orthodiascope.

1. Fluorescent screen mounted with lead glass. 2. Opaque box. 3. Supporting frame. 4. Adjustable shutter. 5. Handle to shutter. 6. For moving box laterally. 7. Compression frame.



New Orthodiascope.

1. Plate holder. 2. Opaque box for x ray tube. 3. Supporting frame. 4. Compression diaphragm cylinder. 5. Counter-weights. 6. Base.

thickening. Enlargement of these glands produces a distinct fusing of these normal shadows causing an irregular more or less opaque shadow in this location. Calcified tubercular lesions usually cast very sharp, small shadows which are difficult to differentiate, however, from anthrocotic particles in the lymph glands and lungs. We have not found the vertical position of a small heart a very constant or helpful sign as an indication of incipient tuberculosis. William's diaphragm phenomenon, *i. e.*, the restriction of the movements of the diaphragm on the affected side, has been disqualified by a number of investigators as of any value in the diagnosis of incipient tuberculosis. They have demonstrated that this phenomenon was not present in the majority of positive tubercular cases.

Conclusions. The x ray examination is a very valuable adjunct to the diagnosis of tuberculosis of the lungs for the following reasons:

(1) Many of the indefinite anatomical conditions of the pleura are easily demonstrated positively.

(2) The lesions of third stage tuberculosis (infiltrations and cavities) are diagnosticated positively as to size, number and location.

(3) The extent of known tubercular lesions of the second stage (infiltration and beginning lesions) are demonstrated more accurately than by physical findings alone.

(4) Combined with the clinical and physical findings it affords valuable evidence in the diagnosis of a majority of the cases of incipient tuberculosis.

THE PASSING OF AN OLD THERAPY.*

BY OSCAR L. PEAK, M. D., SPRINGFIELD, MO.

No profession has a nobler work before it than that of the doctor. Men of no other calling have better opportunities to do good to all the people than all the doctors.

They hold the closest confidence of their patrons and can exert influence for good or evil as they choose; and they do unconsciously exert it according to the predominence of one or the other of these qualities in their own minds. "As a man thinketh, so is he."

Some physician is the first to direct the care of the first-born in nearly every home, and his counsel and instructions to the trusting young mother at that time will enter largely into the shaping of the character of all the children born into that home.

How important then that we weigh well every word and action, that we may start them rightly; in short, that we may have a conscience and obey it. We do not need to lecture them or be needlessly officious in their family affairs, but simply direct our great influence to the end of uplifting humanity, and making Christian purity and protection possible. Children grow up to look on the family doctor as a model man, and their confidential friend. Hence, a word of advice or a timely suggestion from him nearly always falls into fertile soil; and we should not permit these to be lost opportunities to be charged up against us.

One of our most frequently misused opportunities is in the dangerous attitude which the majority of us have taken in regard to the use of alcoholic stimulants. I believe that it is wrong for us to use or consent to the use of it in any form, lest in trying to do good we do our patient and his family an everlasting injury.

There is, unquestionably, no doubt that thousands of persons have been started in the downward course of the drunkard by the direct act, advice or sanction (and I am ashamed to say too often by the example) of their family physician.

Many and many a victim of alcoholism can give a testimony similar to the following quoted one. "I never drank in my life until after it was given me during sickness as a medicine. I have felt the need of it continually since."

Ninety per cent of such cases, started by the doctor, ultimately become excessive drinkers. The weakened physical condition during sickness finds the person doubly susceptible to the effects of alcohol and leaves in him an increasing desire for it, with a decreasing will

*Read in the Medical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

power with which to resist it. Thus unintentionally the die is cast by the doctor for his patient's ultimate ruin. He has converted an acute disease into another chronic one.

Many a loving mother has started her children to the ditch by giving them their first taste of whiskey on the sanction of the good old doctor, while perhaps both the mother and the doctor were personally total abstainers, but were laboring under the delusion that whiskey was necessary. The widespread prevalence of this pernicious fallacy has become truly alarming.

Even since I began writing this paper the mother of a four-days-old baby boy said to me, "Doctor, don't you think it would be good for the baby to give it a little sweetened water with a few drops of whiskey in it?" I replied, "No, sister, he will learn *that* soon enough." In further conversation she told me that all of her children (four of them boys) were just crazy for whiskey, while neither she nor her husband cared much for it. She acknowledged, too, that she gave whiskey to all of her babies.

Unfortunate indeed is the man or woman whose dear mother has planted in him or her a desire for strong drink.

It is a fact, too, that many good people keep a bottle of whiskey in their homes, and the most frequent use of it is to make a little toddy for the children for every little indisposition.

Gentlemen, it is plainly our duty as custodians of the welfare of the people, not only to advise against, but actually to enter our protest on such practices, so that the blame may no longer be laid at the door of our noble profession. I believe common law puts it that when a man condones or consents to a wrong deed he becomes *particeps criminis*. The people have a right to expect their medical adviser to warn them against all that is injurious to them.

Looking at it from a business standpoint, the liquor traffic is distinctly the doctor's enemy. It increases his work and decreases his pay, by absorbing the wages, salary and wealth of his constituents; by breeding disease, crime, poverty and degeneracy which he must take care of, or cowardly dodge the responsibility. I say "responsibility" because I believe that if the great body of physicians in this country, with the great influence they possess, had, as a unit, taught rightly and practiced rightly for the past decade, we might already have had this national evil corrected instead of having to wait another decade.

Alcohol is a functional and tissue poison and is not necessary in our practice; in fact it is to be dreaded and distrusted as one of the seductive, dangerous, habit-forming drugs, with but little excuse for its existence as a remedy.

Admitting for argument's sake that it possesses all the virtue which its adherents claim for it, you only have to look about you for abundant proof that it falls far short of recompensing for the evil it

produces. It causes more deaths than it saves lives. No sort of a compromise with such an evil is justifiable.

"There is no disease demanding a remedy where alcohol might be given, in which the materia medica does not furnish something better;" and we can find it by searching for it.

As an antidote for carbolic acid poisoning it has a commendable virtue; but the number of persons who are burned to death or maimed by carbolic acid becomes infinitesimal as compared with the number maimed or burned to death by the antidote.

Twenty years ago I commenced using milk instead of brandy in my fevers, and my deaths have become fewer and my fevers of shorter duration. Pneumonia especially subsides more quickly and perfectly without alcohol. Within the past year I had a bad case of pneumonia in an inebriate. I treated him without alcoholic stimulants of any kind and he made a perfect recovery within three weeks. Less than two months ago I had a case of pneumonia in the person of an emaciated old lady 71 years old and she made a good recovery without alcoholics.

The typhoid cases go through more smoothly, with less dilirium, and come out stronger without it than with it.

Our up-to-date pharmacists are already anticipating the trend of things and are providing nearly all, if not quite all, necessary remedies for our use, without even alcohol as a preservative.

I will quote to you a few opinions of some of our highest medical authorities on this subject.

Dr. Geo. M. Gould, formerly editor of American Medicine, says: "The majority of physicians do not now prescribe alcoholic liquors."

Dr. Nathan S. Davis, deceased, former Dean of Northwest University Medical College, Chicago, said: "I have found no case of disease and no emergency arising from accident that I could not treat *more* successfully without any form of fermented or distilled liquors than with. For the past 54 years I have not found it necessary to prescribe alcoholic liquors."

Dr. J. M. Aiken, lecturer on nervous and mental diseases in Omaha Medical College, said in a lecture to students: "The use of alcohol as a beverage or therapeutically, is in either case a habit of the user. The stimulation is but temporary, the reaction leaving the nerve cells of the individual with less resisting power than before the ingestion of alcohol. Never permit a verbal or written prescription of yours to give rise to the use of a habit-forming drug."

Sir Benjamin Ward Richardson, M. D., an eminent student of alcohol, said that he believed a brain once stupefied by alcohol could never again be quite equal to what it was before.

Prof. Max Kassowitz of Vienna, Austria, asserts that the dogma concerning the nourishing and strengthening character of alcohol is one of the fatal errors of science; and he earnestly protests against permitting children under any circumstances, sick or well, to receive alcoholic drinks.

Dr. Boynton, Clifton Springs, N. Y., says: "The best class of thinkers, men of the best intellectual gauge, are those who are doing away with this miserable, unscientific practice of giving liquor." Now if we Missouri doctors are on this plane it applies to us.

Prof. Frank Woodbury, Philadelphia, Pa., says: "In its relation to the human system, alcohol is never constructive and always destructive."

Dr. C. H. Hughes, St. Louis, Mo., in speaking of alcohol, said: "It is an old and sly offender and very much the mocker in medical practice that it has been pronounced in holy writ. It exhausts the latent energy of the organism often when that power is most needed to conserve the failing strength of the body in the battle with disease. I never prescribe it to be taken as a beverage, nor at the patient's discretion, nor any sort of bitters. Strong constitutions are needed to counteract the toxic effect of alcoholic liquors."

I might give many more testimonials from sources equally as good, some of them more elaborate and just as strong; but when these eminent doctors—the teachers of doctors—make such strong and unqualified statements against the use of *any drug* it is time for us to quit it, in fact, I think it is criminal in this instance for us not to quit it.

No better evidence could be afforded of the inutility of the drug; and with the growing diffusion of knowledge it is destined soon to be classed with the obsolete drugs.

Without giving the exact details or data of results, I will simply give you the names of some of the institutions for the care of the sick, that have made a bedside test of the comparative value of the use and non-use of alcoholics with their patients. These have given out the figures, which show a marked decrease in the mortality in favor of their non-use in all diseases.

The West Haven Infectious Diseases Hospital, London.

The Liverpool Fever Hospital.

Mercy Hospital, Chicago.

Battle Creek Sanitarium, Michigan.

Nordrach Ranch Sanitarium, Colorado Springs.

Bellevue Hospital, New York.

The Pottenger Sanitarium for Diseases of the Throat and Lungs, Monrovia, Calif.

National Jewish Hospital for Consumptives, at Denver.

It has not been many years since the favorite prescription for consumptives was whiskey—and they nearly all died. At present milk and raw eggs, fresh air and exercise is the favorite treatment and it is pronounced curative. The consumptive experts are almost a unit in shutting off alcoholics.

One of them, Dr. Jno. E. White, of Colorado Springs, says: "Whiskey and liquors in any form, are absolutely poisonous to the consumptive; and that trying to cure consumption with whiskey is like trying to put out a fire with kerosene."

Another expert, Dr. Legrain, of Paris, France, says: "Alcohol predisposes the individual to tuberculosis. * * * And to conquer alcoholism is to conquer tuberculosis."

An eminent French scientist and member of the Academy of Medicine has made the statement that the abuse of spirituous liquors is responsible for a new form of tuberculosis, which in the case of a hard drinker develops at the top of the right lung toward the back, whereas ordinary cases develop first at the top of the left lung, toward the front. This high authority further declares "that any hope of preventing the spread of tuberculosis is futile until the spread of alcoholism is checked."

Our anti-tuberculosis societies would be getting down among the roots if they were bending the larger share of their efforts towards stamping out the liquor traffic.

In October, 1905, the following resolution was adopted by the International Congress on Tuberculosis, held in Paris, about 2000 medical scientists being present:

"Resolved that, in view of the close connection between alcoholism and tuberculosis, this Congress strongly emphasizes the importance of combining the fight against tuberculosis with the struggle against alcoholism."

I am conscious of the fact that some may denounce these as but the outcroppings of fanatical brains; but remember that it is apparently a universal law, though mysterious, that man is powerless to produce any great revolution, permanently good, unless he pays, with suffering or death, for the triumph of his dreams. Hence, how few there are who can get their own consent to run the gauntlet.

However, the above quoted opinions and comparative clinical results are not sentimental fancies but stubborn facts, evolved from scientific experiments and observations, by learned, unbiased minds, purely for the benefit of their patients and given out for the benefit of mankind. They stand out clearly away above all prejudice and the fog of the fogy notions of old theorists.

If physicians who still believe they need alcohol would study up the subject and forsake the old beaten path for a few months, and treat their patients along non-alcoholic lines, it would be a decided revelation to them, as well as a satisfaction to him who wishes to do the very best for his charge.

Have you not noticed, too, that medical literature against alcohol is increasing and that recent writings defending its use are almost nil?

Gentlemen, we will not have done our full duty if we neglect to correct those nursing mothers who think it necessary to drink beer, ale or wine to furnish sustenance for their babes. It is true that these do stimulate the glands to a little greater secretion; but it is not the good nourishing milk that good food, pure water and fresh air produces. It is a sort of swill milk which nearly always creates in the child an abnormal desire for strong drink; while the mother has contracted a permanent drink habit.

Statistics show that the increase in drinking and drunkenness among women has already assumed proportions that threaten the foundations of our commonwealth. A vigorous protest should also be made by us against the many seductive whiskey patent medicines, which so often insidiously make drunkards of the unsuspecting.

Although I have always been a total abstainer, I prescribed alcoholic stimulants in my practice when I began, because I was taught to do so, and believed it a necessary medicine. I was first lead to observe that it was not needed by an occasional patient—crank—protesting on its use, saying that they would take their own chances without it, as they preferred to die sober. Experience proved that they did not need it, and others were given the same chances until finally the scales fell from my eyes and I cut it *all* out.

Believing that every right-minded physician does not wish to betray the great confidence reposed in him as the family medical adviser, or use his great influence wrongly; and believing that every physician should, and really does desire to live up to the full measure of his ability for good, I urge the abolition of alcohol from his materia medica as one of his greatest opportunities.

Thus we may very materially assist in the passing of this needless old therapy.

A New York Druggist was fined because his clerk sold and recommended a medicine which failed to accomplish what was promised. The appellate division of the Supreme Court of New York State upholds the decision. Of course, this is not necessarily law for other states but it does mean that it is wise for druggists to be careful about recommending or endorsing medicines sold over the counter. Let the customer assume the responsibility. The government contends that the word, "cure," should not be used on patent medicine labels and now it seems that it should be used only with caution when conversing with a customer.—(*Meyer Bros., Druggist.*)

TRAUMATIC NEUROSIS, OR RAILWAY SPINE.*

BY C. R. DUDLEY, M. D., HANNIBAL, MO.

The term "Traumatic Neurasthenia" is sometimes applied to the varied nerve symptom-complex that makes its appearance in many cases following a traumatism, or a sudden exposure to the possibility of a severe traumatism and where life is endangered, but it is inadequate to define completely the morbid process encountered. The condition resulting from such an accident or exposure is a neurosis, physical or psychical in origin, which may present the symptoms of neurasthenia, of hysteria or of both.

To these symptoms, often ill-defined, were first given the name of "Railway Spine" by Erichsen, in whose opinion they resulted from an inflammation of the cord and its coverings following injury, a view long since discarded.

Owing to the greater frequency and the wide-spread distribution of the causative agencies, this condition is most frequently found resulting from railway accidents, but may follow mine explosions, falls from an elevator, ladder, house or other elevated object, or may result from traumatisms received in runaway accidents, etc. In all of these accidents an injury may have been received, or only a shock or concussion in which the body may not apparently have suffered. The symptoms of a traumatic neurosis may likewise follow a deep mental impression, or a severe mental strain associated with bodily exposure. By far the greater number, however, result from steam or electric railway accidents, and whether or not the vulnerability, to suits for damages, of the corporations owning the railways is a predisposing factor to the development of nervous manifestations following an accident, the fact remains that in a certain proportion of such cases the condition is a morbid entity and not an act of malingering.

Traumatic neurasthenia usually makes its appearance after the immediate effects of the accident subside, the patient tires easily and quickly, suffers from pains and aches in various parts of the body, headache, backache, limbache, muscular fatigue, muscular exhaustion with paresthesia and numbness in the extremities, to such an extent that it prevents the patient from following his customary and usual avocation. So marked are the symptoms of fatigue in these cases that the condition has been termed the "fatigue neurosis." The patient usually complains of loss of appetitie, dyspepsia, constipation, inability to sleep, loss of memory, cardiac depression, and mental depression or mental confusion. The reflexes are usually exaggerated, but are not as persistent

*Read before the Ralls County Medical Society, July 9, 1908.

as those of organic disease of the cord, though as an associated condition we may have a certain amount of muscular rigidity and tenderness along the spine with hyperesthesia.

Traumatic neurasthenia may develop in anyone, while traumatic hysteria appears only in those of an inherited neurotic predisposition, and here the accident is only the exciting cause. Many of the conditions diagnosed as "railway spine" are in reality cases of traumatic hysteria. Traumatic hysteria and traumatic neurasthenia may be present together in the same patient. Da Costa states that neurasthenia is a condition of exhaustion associated with a number of chronic disorders, that it forms a foundation on which hysteria may develop. Hysteria is made up of a morbid impressionability, hyperesthesia of the nerve centers, lowered self control and an increased sensitiveness of the peripheral terminations of the nervous system. The accident plays a double part in producing traumatic hysteria,—first,—by its effects on the mind (psychical traumatism,)—second—by its effects on the body, which concentrates the attention to one point. The site of a traumatism may localize symptoms, and an area of pain or stiffness often serves as an autosuggestion which becomes magnified by the enlarging tendency of an hysterical mind. Charcot early pointed out the fact that a condition of hysteria long latent and unrecognized, may be aroused into activity by a blow or an accident.

In a few instances where death has resulted within a comparatively short time after spinal concussion, punctate hemorrhages in the brain and cord have been found on post mortem examination. In others, a more or less advanced arteriosclerosis with degeneration and beginning multiple sclerosis in the white matter, and degeneration of the sympathetic ganglia, have been observed, and in still other cases a general arteriosclerosis of the circulatory system. In the majority of the cases examined post mortem, however, no demonstrable lesions were found.

The symptoms of hysteria of traumatic origin differ but little from those produced by other causes, save those referable directly to the location of the injury. The absence of spasm, paralysis, hyperesthesia, paresthesia, or anesthesia at a distance from the site of the injury, excludes a meningo-myelitis. If a pain that has lasted for months is not increased by downward pressure on the head or shoulders, and there is movability of the vertebra with no angular displacement, caries of the vertebral bones can be excluded. According to Pearce Gould, when there are wasted muscles and when moderate movements of the spine are painless but the effort to bring the body to an erect position causes pain in the erector spinæ region, the trouble is a strain of the erector spinæ muscle. If the muscle is not wasted and the pain is in bending forward rather than in straightening up, the vertebral ligaments are the seat of the trouble.

The severity of the symptoms and the intractibility of traumatic neurasthenia or hysteria to treatment is often markedly influenced by an existing suit for damages against the "soulless and grasping corpora-

tion" which happens to be the defendant. Such coexisting complications often make a correct diagnosis of the presence and extent of the morbid condition, one of marked difficulty and one which taxes the skill and the diagnostic ability of the surgeon to its fullest extent to decide between the real and the simulated. Frequently does the surgeon observe a patient, who, outwardly, is an incurable nervous wreck, bloom like a new flower with health and vigor, shortly after having received, as a healing salve for his injuries, a favorable judgement for a goodly sum of money. With such an incentive it is not astonishing that malingering becomes almost a fine art, and to detect the fraud, close watchfulness, rigid scrutiny, and a most thorough physical examination are necessary. A malingerer will always exaggerate his symptoms, and particularly those of pain and tenderness over the spine and the site of the supposed injury. His reflexes are increased out of proportion to those in actual diseased conditions, and are retarded. Close observance of the patient's behavior and movements when his attention is diverted from his disease, when his vigilance is relaxed, will reveal to the surgeon the true situation in a professedly morbid condition. Drunken with ether, in the early stage of anesthesia with this agent, and cut off from the dominating influence of the will, a pretended paralytic suddenly regains the power and strength of robust manhood, and the erstwhile morbid affection vanishes like mist before the morning sun.

The function of the surgeon acting either as the medical attendant to the patient or as the representative of the defending company or corporation, consists in determining—first—the existence of actual disease, second, its character, whether simple neurasthenia, severe hysteria or an organic lesion. The outlook for recovery is good except in cases that present the more serious symptoms (Osler). It must be remembered, however, that a bona fide traumatic neurosis is one of the most intractable conditions that we are called upon to treat and, with the exception of such surgical measures as enforced rest of the injured and painful parts by immobilization with plaster or other means, the treatment is that of neurasthenia in general.

HIP JOINT DISEASE.*

BY G. B. SCHULZ, M. D., CAPE GIRARDEAU, MO.

Hip joint disease is very much more common in children than in adults. In the former it is generally bony in origin, the tuberculous deposits being in the majority of cases at first in the femoral epiphysis, a region naturally subject to the action of repeated shocks and slight traumatism. In not a few patients the acetabulum is first affected, and primary infection of the soft structures of the articulation is probably by no means so infrequent, even in early life, as is often supposed. By some writers the disease is divided into three stages: First, that of deposition of the bacilli and the early irritation and new formation consequent thereupon; second, that of fully developed arthritis, with its effusion and fungous masses; third, that of breaking down of the infected tissues and greater or less disorganization of the joint, followed by repair, which is usually slowly effected and far from perfect, or by death. It is to be understood that this refers to neglected cases. A natural cure results in one of two ways: by the absorption or calcification of the tuberculous tissue at an early or late stage of the disease; or by the purulent degeneration of such tissue and its evacuation by an external opening and discharge. But a spontaneous cure is not the natural tendency of the disease in the early stages. The suppuration which comes later seems to be nature's effort to eliminate the diseased material, and it is the common method by which spontaneous cure results when it does occur. This late stage of the disease is not likely to have resulted until malposition and shortening of the limb have come on and much impairment of the general condition has resulted. It is this state of affairs that makes the spontaneous cure of hip joint disease unlikely and imperfect. When a spontaneous cure does occur it is almost invariably with an ankylosed joint. The articular surfaces have been destroyed by the disease and being melted into pus have been carried away and in part of the joint at least, eroded and hyperemic bone surfaces are in contact, and motion between these would be impossible. At first, these are connected together by the organized granulation tissue, which solidifies into tough fibrous tissue, which in turn becomes the seat of the deposit of lime salts, and a solid mass of bone exists where once there was a joint. In these cases, however, at autopsy an included cheesy mass which still presents some signs of activity, is found. It is to these foci that one looks for an explanation of the late relapses of the disease and the very great harm which is sometimes done by forcible manipulation of these joints and consequent relighting of the original tuberculous disease.

*Read before Cape Girardeau County Medical Society.

Symptoms. The earliest manifestations of tuberculous disease of the hip are an indisposition of the child to run and play as usual, a slight lameness or stiffness of one leg, particularly observed on first getting about in the morning, and perhaps some pain. Pain may be absent at any and all stages of the disease, and is not a diagnostic sign for or against the presence of hip disease. It should always be borne in mind that tenderness or sensitiveness at or about the joint may be absent, consequently the absence of the symptoms does not indicate the absence of well pronounced disease. The use of an inflamed joint always increases the pain, so that it is instinctively kept at rest as much as possible. It will be observed that an effort will be made to avoid moving the joint, which causes more pain than the mere bearing of the weight of the body, so that if such a child has occasion to pick up an object from the floor, it will flex the spine, keeping the hip joint more or less fixed, and will avoid squatting. The stiffness is due chiefly to spasm of the muscles about the joint. Lameness is due in part to the same cause, and also in many cases to the pain caused by using the joint. The pain is usually referred to the neighborhood of the knee and the inner and lower aspect of the thigh, in the distribution of the obturator nerve, twigs of which also enter the hip joint, and is only in rare instances felt about the hip. The child may cry out suddenly, awakened from sleep and is apt to be restless and moan during sleep.

Examination at this time will probably show that the child stands much of the time with the weight largely supported on one foot, the diseased limb being slightly advanced. The gluteo-femoral crease on this side will be less prominent than on the other. If the patient is now placed in the recumbent position and the extreme range of the various motions of each hip joint be tested by flexing, extending and rotating the thighs, it will be found that on the well side the movements will be free, while on the other muscular spasm will restrict them, and some resistance will be due to pain. The most prominent muscular spasm at this time is that of the ilio-psoas, which keeps the thigh in constant slight flexion; consequently if the leg of the affected side lies flat on the table, the lumbar spine will be arched forward so that the hand may be passed between the back and the table. In order to have the back flat and straight it will be necessary to raise the limb a definite amount by flexion of the thigh. There may or may not be some swelling observed about the affected joint, depending upon whether there is any synovial effusion or particular thickening. Careful measurements of the circumference of each thigh at similar points may show a little wasting on the affected side. There probably will be a slight elevation of temperature at some time in the 24 hours. If treatment is not instituted the symptoms enumerated gradually become more marked. The limb is used less and less, the lameness becomes pronounced and the pain increases. The body is now largely supported on one limb if the patient stands at all, the gluteo-femoral crease is still further obliterated, the fixation of the joint is almost complete, the flexion is considerably greater, and the thigh

is usually abducted and everted, or more rarely adducted. There will usually be more or less fullness about the joint, and wasting of the affected limb will be marked. The abducted position of the limb will carry the foot away from its fellow, so that walking would be impossible and the limbs would be constantly separated. To overcome this the lumbar spine is curved laterally, this tilts the pelvis up on the sound side and down on the diseased side. Normally the elevation of the pelvis on the sound side would carry the corresponding limb away from the middle line, but it is adducted in order to meet its fellow. The pelvis being tilted as described, the acetabulum of the diseased side is on a lower level than the opposite one, hence the corresponding extremity appears to be longer than the other limb.

Pain at night is especially severe, and the child frequently cries out in sleep or is awakened. During sleep the muscles, which have been in a condition of constant spasm to fix the joint, relax and the limb is allowed to move. The irritation thus caused to the joint structure induces a sudden and forcible contraction of the muscles, bringing the femoral head against the acetabulum, thus causing severe pain. The abducted everted position of the limb is assumed not only because in this position of the thigh the cavity attains its maximum capacity, and hence best accommodates the fluid in the joint and gives the greatest ease, but also because of the presence of the fluid in the joint under tension causes the limb to assume this position without the aid of any other factors. The child's health suffers more or less, as shown by anemia, loss of appetite and weight. There is now a definite fever of an irregular type.

If the case is still neglected, all the conditions become worse. The swelling about the joint increases and distinct fullness or even fluctuation may be felt in front of the joint or about the great trochanter. The disease, having involved the tissues outside the capsule, forms localized tuberculous collections beneath the skin, which in time discharge spontaneously, leaving sinuses, or travel along lines of least resistance and appear in the buttock, beneath or even above Poupart's ligament, and on the inner aspect of the thigh. Occasionally the acetabulum is perforated and an abscess forms in the pelvis. After the capsule has been ruptured the pain becomes less. At this time the limb may assume the position of adduction, the action of the adductors being now unopposed, and the flexion increases. Owing to the pressure of the head of the femur against the acetabulum caused by the contraction of the muscles, the adjacent cartilages become eroded, exposing the bone, which is gradually absorbed or becomes carious. This destruction of cartilage and bone both in the femoral head and acetabulum results in actual shortening of the limb. The atrophy of the limb is now extreme. The general condition of the child becomes worse as the disease progresses, and if pyogenic infection be added to the tuberculous process, as frequently happens through the sinuses, a hectic condition results.

Diagnosis. In the advanced stages of hip disease diagnosis is easily made, but in the beginning it will be recognized only by a careful ex-

amination, the most important part of which is the examination of the joint itself. For this purpose the patient should be supine upon a hard, flat surface, the trunk and lower extremities free from all clothing, the legs placed in a straight line with the body and the feet together. A line drawn from the suprasternal notch through the umbilicus and the symphysis pubis when prolonged, should pass between the two internal maleoli. It should now be observed whether the back is flat and in contact with the table or whether there is a space between the table and the lumbar spine. If the back is flat, are both lower extremities straight and in contact with the table? In the earliest stages of coxalgia one of the most uniform symptoms is the spasm of the ilio-psoas muscle which causes flexion of the thigh. If the thigh is straightened by pressing the knee down to the table, the origin of the psoas will be pulled upon and the lumbar spine arched forward, leaving a space between the back and the table. A line should next be drawn between the two anterior superior spinous processes of ilium. Note whether this is exactly at right angles to the long axis of the body or whether the process is higher on one side than on the other. In the latter case there is either abduction or adduction present. If the limb is abducted, the process on the affected side will be lower than that on the opposite side. The limb should then be carried until the two processes are on the same horizontal plane; this shows the degree of abduction. While the limb is still in this position it should be raised until the lumbar spine is flat upon the table; it will then be in what is called "the line of deformity." The movements of the joint may now be tested by flexion, extending, adducting, abducting and rotating. In coxalgia the range is restricted. Pressure upon the two trochanters, forcing the head against the acetabulum, may cause pain on the affected side. The conditions from which it must be distinguished at this time are, Pott's disease, sacro-iliac disease, disease of the knee joint, perinephric abscess, certain cases of appendicitis, and rheumatism. In Pott's disease there is the same indisposition to run and play, but the child usually places its hands upon its hips when it walks or upon articles of furniture or other supports to take the weight of the trunk partly from the inflamed vertebræ. There may be an angular projection of the spinous process and there will certainly be tenderness over the affected area. If the child has occasion to reach to the floor, it will squat down, but will keep the spine straight and rigid, supporting his shoulders by his hands on his hips. Finally, by examination in the recumbent position, the hip joints will be found to have a full and free range of motion, without causing any pain. Pott's disease, with abscess in the ilio-psoas, causes flexion of the thigh which may strongly suggest hip disease. Sacro-iliac disease produces much the same indisposition to movement as does coxalgia, but the pain and tenderness are localized in the sacro-iliac articulation. The tenderness will be elicited by pressure over the joint and also by pressing the two iliac crests toward each other. There may also be swelling over the affected joint. Again, motion at the hip joint will be found to be normal. The complaint of pain

about the knee joint in coxalgia will usually call attention to this joint, and many patients have been given medicine for rheumatism of the knee without any examination having been made. Perinephric abscess, by irritating the psoas muscle, causes flexion of the thigh which might suggest hip disease, but the similarity ends here; there are no other symptoms in common except that each gives rise to more or less fever and constitutional manifestation. Sometimes an inflamed appendix lies in the ilio-psoas sheath and causes contraction of the latter in the same manner. Perhaps the most common error in the early stages of tuberculous joints is to treat the case as one of rheumatism. It should be remembered that the latter is not common in childhood, while tuberculous bone and joint affections are frequently seen; that rheumatic manifestations are apt to be multiple, while those due to tuberculosis are generally single.

Prognosis. This will depend in a large measure upon how far the disease has advanced when it comes under treatment. In the earliest stages if the proper treatment is instituted its progress will frequently be arrested and a complete recovery with full restoration of function will be obtained. In other cases the disease goes on to abscess formation in spite of everything that can be done. Even in such cases, if the treatment is continued patiently, a good result will be obtained in the majority of instances. In later cases when the deformity is marked and when abscesses have formed, the prospects of securing a good joint are not so good, but with complete rest many of these abscesses heal and comparatively little damage results. If the disease is still further advanced, with extensive destruction of the articular cartilages and even of portions of the femoral head and acetabulum, and if the child's health is seriously undermined, the outlook is not favorable, although in some of the cases healing finally takes place, leaving a shortened limb firmly ankylosed. Prolonged suppuration may result in amyloid changes in the viscera, and the patient's vitality may thus be permanently injured. Until a perfect cure is obtained there is always danger that the tuberculous process may be transferred to other parts by an embolus or that a general miliary tuberculosis may result. The active period of the disease is from two to five years, and the joint should be protected by a suitable splint from one to three years after the recovery appears complete, lest a latent process be excited to renewed activity.

As respects treatment, the earlier it is instituted the sooner and more perfect may the patient be expected to recover. The two ssential indications are rest and extension. The value of rest in all inflammatory conditions, so universally recognized is nowhere of greater importance than in coxitis. Complete rest can be secured only in the recumbent position. The body must be kept obsolutely quiet as well as the limb, otherwise the joint will be moved and the treatment will fail to accomplish one of its most important functions. If the patient be old enough to obey instructions, the ordinary surgical bed, having a firm mattress and an extension apparatus, will be all that is required. For children

who need restraint nothing equals the frame devised by Bradford. This is made of ¼-inch gas pipe joined at the four corners by right-angled joints. It should be slightly longer than the patient, and as wide as the extreme width of the shoulders, it is covered with light canvas or stout drilling, except under the buttocks. The patient is secured by straps, passing over the chest and pelvis. This affords ample means for fixing the patient's body, it is at the same time a litter, upon which the patient may be moved at any time with minimum disturbance to the joint. The traction must be made in the "line of deformity," that is, the limb should be so placed that the lumbar spine rests upon the bed, the two anterior superior iliac spines should be in the same horizontal plane, and the rope from the extension apparatus carried in the direction of the long axis of the limb over a pulley attached to the foot of the bed. The weight to be attached to the rope will vary from about No. 1, for quite young children, to No. 5 in older and stronger subjects. The comfort of the patient is usually the guide to the exact amount. The proper amount of flexion is maintained by placing pillows. The foot of the bed should be slightly raised so that the body of the patient will act as a counter-extending force. It will be found, if the case is doing well, that the deformity can gradually be corrected by progressively lowering the limb without affecting the position of the pelvis. After the limb has become perfectly straight and a fair range of motion made at the joint without moving the pelvis or causing pain, the patient may have some form of mechanical support applied, and then may be able to go about. All of the many appliances have for their immediate object, securing of fixation or traction or a combination of the two. Recognizing the fact that fixation cannot be absolute and that it does not overcome muscular contraction with the resulting injurious pressure between the head of the femur and the acetabulum, the great majority of American surgeons are employing some form of traction splint. In these splints opportunity is afforded for altering their length at will by drawing away the lower sliding rod from the upper, or by acting upon the foot-piece through the aid of a windlass, the counter-force through the perineal bands preventing the body from following. The pressure symptoms are thus relieved or prevented and recovery correspondingly promoted. When the capsule is distended or there is an extra-articular accumulation, aspiration will give great relief. When the so-called abscess is nearing the surface, whether it should be opened or left to itself to undergo absorption, as many times happens, or be spontaneously emptied, will depend upon whether or not it is causing much local distress. If it is, it should be aseptically opened and drained, the after use of iodoform injections being of much service. If it is not, careful attention to the maintenance of quietude is all that will be necessary. As a rule, operative interference should be confined to opening abscesses and sequestra if present. The excision of the hip leaves a shorter and weaker limb than that obtained by the more conservative treatment, and while in successful cases the duration of treatment is lessened, this will rarely compensate for the greater shortening.

THE REMOVAL OF THE LACHRYMAL SAC.*

BY J. H. THOMPSON, M. D., KANSAS CITY.

Very few cases of suppurative dachryocystitis can be cured by any treatment other than the destruction or removal of the lachrymal sac. Some endeavor to destroy the mucous membrane with caustics; others remove entirely the diseased tissues, which is probably the best procedure. There are several ways to do this operation, but perhaps the following, because of its ease and certainty, will appeal to the oculist.

Under complete general anesthesia the lower canaliculus is slit freely into the sac, which is then washed out with a bichloride solution 1-3000. An incision is made through the skin, beginning over the center of the palpebral tendon extending in a curve downwards and outwards ¾ of an inch or more. The knife must not go deeper than is necessary to cut the skin. In persons with a relaxed skin the wound is best made with scissors. This is done to avoid hemorrhage, because such an incision will miss the larger veins and arteries at the side of the nose. When the bleeding is controlled, a No. 5 Bowman probe is passed into the duct and held by an assistant. If the canal is opened the probe may be inserted far enough to stay in place. By the aid of the probe the finger can easily feel the bony edge of the opening of the canal, which should be exposed by blunt dissection. Then there will be no difficulty to find and see the end of the sac. The probe is now withdrawn and the neck of the sac separated from the bone and soft tissue by a strabismus hook, or other convenient instrument. When sufficiently free the lachrymal tissues are grasped by a pair of strong hemostats, and the sac cut across as close to the bony canal as possible. The sac thus held in the jaws of the forceps, is easily pulled down and dissected away, the only difficulty being where the canaliculi enter, which must be cut across with the scissors.

The most important part of this operation is to have the sac grasped firmly by the forceps, because, when the removal of the sac commences the hemorrhage becomes quite free, and unless the sac is well in hand, it may be lost and cannot then be completely removed. This is the reason why many operations are failures.

Usually in chronic disease the walls of the sac are quite thick and tough, sometimes they are thin and the forceps may tear away; should this happen it is very difficult to remove the sac completely. Then it is best to find the interior of the collapsed bag by the aid of a probe passed through the canaliculus and the sac packed with gauze.

*Read before the Jackson County Medical Society.

There is always some hemorrhage, so it may be necessary to twist one or more small vessels; usually the bleeding is controlled by pressure. It is not wise to pack the wound, because, when the packing is removed the walls will not collapse and the healing may be delayed two weeks. When the dissection is complete and the parts clean, two stitches may secure immediate union; usually the wound opens but heals in several days by second intention.

The operation should be completed by removing, with a small, sharp curette, all the soft tissue within the lachrymal canal; otherwise there is danger that suppuration will continue from that focus.

In case the sac is packed, the packing should remain forty-eight hours; when it is removed it will leave quite a hole, in which can be seen the remnants of the lachrymal tissue; these must be destroyed by the actual cautery and the wound left to nature.

American Medical Administration in Panama Through British Eyes.—It is gratifying to read such a generous appreciation of American state medicine as is contained in an article on "America's Triumph in Panama," by John George Leigh. Mr. Leigh, it will be remembered, contributed articles to the *Lancet* explanatory of the climatic and hygienic problems facing the United States administration in the inaugural stages of work on the Isthmian Canal. He insisted that the success of the undertaking would depend not on the skill of modern engineers, of which there was no doubt, but on the question whether the health environment could be so ameliorated as to abolish the disastrous conditions that had caused the failure of previous attempts. He urged that the last word in the fateful decision then pending, between high-level and low-level plans, respectively, should be spoken "not by the aspiring engineer, but by the profession which will be held mainly responsible should the prophecies of ill be justified by events." The temporary success of the adherents of the sea-level scheme and its speedy abandonment justified Mr. Leigh's foresight.

The article concludes: "In the lap of the gods rests the future of the Panama Canal enterprise. Whether it prove the great engineering triumph and commercial highway to which many of us look forward with confidence time alone will show, but of one credit history can never rob the United States. Among much good and evil it must record that it was under American administration that the knowledge and resources of modern science were applied to the hygienic redemption of the once noisome isthmus. Such fruits of labor in this direction have already been gathered that they promise to rival as a worthy monument of American achievement even the canal itself." We can thankfully accept this ungrudging praise, for we know it to be as just as it is generous.—(Abstract from editorial, Journal A. M. A.).

THE STATE'S DUTY TO ITS CITIZENS FROM A MEDICAL STANDPOINT.*

BY J. A. MCCOMB, M. D., LEBANON, MO.

This theme is so extensive that the writer will direct attention to only a few things that to him seem fundamental.

A state is an organization of individuals, living within fixed boundaries, and is so organized for mutual benefit. Residing within the great commonwealth of Missouri there are three and one-half millions of people, each a ward of the state with an equal claim for any help within the power of the state to give.

The social, commercial and religious life of these differ so widely that it has been necessary for the state at times to enact laws under the rule, "The most good to the greatest number."

There is the one with capital and the one without, each clamoring for laws beneficial to himself and urging his citizenship as a reason therefor, there is the one with the raw material to sell and the one with the finished product to dispose of, each urging the same reason; and so on throughout the many varied and diversified interests of the state. There is, however, one common interest upon which all men every where are united. The word above every word, the one word most dear to the heart of every physical man is *Health*. What will one accept in exchange for it? What will one not give to get it? Have you it for sale? Name your price and you may literally wallow in the wealth of the world, for millions are offering you their all for it. Do you desire it? Listen and it shall be told you where to obtain it. Go thou to Father Adam and beg of him that body he left in the Garden of Eden when God drove him hence, and you shall have perfect health, for nowhere else does it exist.

The health of the citizens of a state is its first and greatest asset. A state whose inhabitants are sickly will never become a rich and populous one, because sickness is an expense and the diseased one is not a producer but always a consumer of wealth, either of his own or others. The states of this Union known to be sickly are of the slowest growth, either in numbers or wealth. One of the strongest talking points of a real estate man is the healthfulness of the locality. One of the first questions of a prospective buyer is as to the health of the community. If doubtful on this point, the trade is off. This is as it should be; all realize the probability of the grim reaper garnering a loved one, or perchance one's own life be taken, hence all men everywhere are inter-

*Read in the Medical Section, Fifty-first Annual Meeting, Springfield, May, 1908.

ested in promoting the healthfulness of the state in which they live. Health is the first asset of the state because the worker, to achieve the most possible, must first of all be a well person. It is the greatest asset because the larger the number of strong, vigorous workers, the larger the result accomplished. This being true, the first duty of the state is to the physical welfare of its citizens. The state of Missouri has about six thousand physicians which it has licensed to care for the health of the other three and a quarter millions. She has said to these physicians, "Go forth on your mission of healing and if the people will contribute to your necessities you may live in this state."

She has turned from them to thousands of literary professors, and teachers of the state, "Here is your licenses, you go forth and teach the youth of this state to spell, read, write and figure; come to me and I will pay you." Good, and no man worthy the name would lift up voice or pen to detract one iota from the great educational institutions of this state. But look you at the young men as they pass out with their diplomas to become workers for their beloved state; stand them by those who have graduated from the farm. Look you well—mark them well, so you may recognize them again. Five years have passed, look now. See the college men far in advance, except the many over whom have stood the undertaker and the mourner. Look again,—ten, twenty, thirty years are gone, the college men still leading, but many, very many through lack of endurance have given up the struggle and their places filled by the ones made tough and hardy through exposure to heat and cold, sunshine and rain. The young woman came from college admired and loved by her friends and family; to-day the physician and surgeon are striving to make her life fairly comfortable and the pediatrist is wearing his life away trying to cure her nervous children.

If this picture seems overdrawn it may be relieved by having the strong young man from the farm marry the June graduate and the young college man come to the Ozarks for his wife. The fact remains that the schools turn from their doors far too many girls and boys whose doom is sealed long before they receive their degree. Probably not so many as formerly. The blame cannot be charged against education, for all admit that is what they need. It cannot be placed against the teachers, for they are doing as they have been directed to do. The parent is ignorant that his loved one is in danger. What then? The creator is greater than the created, so to the writer it clearly becomes the duty of the state to provide that these pupils be examined by competent examiners at stated intervals; that such provisions be made for them as will be for their best interest, always from a physical standpoint first. Every child in the state of Missouri, from the time he enters school until he leaves, ought to be under the direct supervision of a physician. Cost!—of course it will cost, but it is money well spent and will bring the state larger returns on the investment than anything it ever attempted. If the weak child can be made strong and educated as

well, you have the difference between an indigent and one caring for an indigent. Is it too much to predict that such supervision, with the inevitable education of fathers and mothers resulting therefrom, together with the progress growing out of such education, would, after a few generations, depopulate the insane asylums, the poorhouses, the medical wards of hospitals, and especially the venereal wards? Note the many expressions of specialists in the last few years confirming this prediction. These examiners must be prepared for this special work, and in addition to the examination of the children, they should be apt to teach and give to each school a course of lectures during the year on physiology and hygiene, with special lectures to the girls and boys of proper age on sexology.

This plan is only a suggested one and in the rough, to be changed and perfected by time and experience. The two points the writer hopes to impress is, first, the great need of physical education, and, second, that the commonwealth is the proper one to have this in charge and to bear the expense. One need not take the time of a medical association to convince it of the inestimable value such supervision and lectures would be to the state. The examiners, of course, would not interfere with the regular physician, but would insist, and if necessary, enforce his recommendations. All treatment of whatever kind, however, should be directed by the family physician or under his instruction. A physician feels justly proud, with an inner consciousness of satisfaction, when he has been instrumental in saving the life of a child, whether anyone else knows it or not, but how much greater is the compensation if that one be multiplied many times. To the writer, this plan seems to get at the foundation of physical perfection. Before life can attain its highest excellency, with its superstructures of mental and moral beauty, it must have its foundation laid deep and strong in physical perfection. The state has recently done well in providing for the control of certain diseases, but it has not yet gotten hold of the great idea of prophylaxis. When it does, physicians will be spared the mortification of having the legislature, urged by some of the states brightest minds, expend thousands of dollars to erect monuments of marble to the memory of the dead, as has been done recently in Missouri. Then will the physician rejoice in seeing these thousands spent for the more noble and glorious purpose of building living monuments of strong and healthy bodies, fit to become fathers and mothers of a succeeding generation, still more noble and glorious than they.

It is hard to find a place for a period for this paper, but it must be with these words—then will the great commonwealth of Missouri find the true meaning of its motto, "The Welfare of the People is the Supreme Law."

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ADDRESS ALL COMMUNICATIONS TO METROPOLITAN BUILDING, ST. LOUIS, MO.

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E. J. GOODWIN, M. D., Editor.

PUBLICATION COMMITTEE:

Walter B. Dorsett, Chairman. M. B. Clopton, M. C. Shelton.

EDITORIAL

THE INTERNATIONAL CONGRESS ON TUBERCULOSIS.

The International Congress on Tuberculosis, held in Washington from September 21 to October 12, is now a memory only. Those whose misfortune it was not to have attended these interesting deliberations, missed a rare treat. One cannot refrain from mentioning the completeness in every detail of program, arrangements and exhibitions. The task was herculean, but seemingly not too much for those in charge, and congratulations are in order. Some apology, however, is due our distinguished foreign guests for the incompleteness of the building in which the congress was held. In itself, the unfinished condition of the building was to be tolerated, yet our great government should have shown a little more consideration, and had the stone and brick masons, carpenters, roofers and laborers desist from their too apparent and noisy demonstrations in trying to complete, in one week, the half completed new National Museum building assigned for this extremely important event. During the first few days the din drowned the voices of essayists and speakers. A compromise, seemingly, was later effected and the noises were lessened, yet at times were too painfully present. It seemed, almost, as if we were meeting in the government cannon foundry.

The exhibits were such that it required hours to inspect them, even casually, and days could be spent profitably in studying their import, from the displays of instructive signs, instruments, literature on how to

combat, prevent and cure,—attracting medical and lay interests alike,—to the many exhibits along pathological lines showing the effects of the tubercle bacillus on man and beast. Of the foreign nations, Germany had the most complete exhibits. Of our own nation, the Empire State with her chief city, outdid herself, and many of the other states made a very creditable showing.

While Missouri confined her work along educational literature lines, the little book "What Missouri is Doing," was sought after and many favorable comments were expressed. The supply was soon exhausted, the book finding its way into appreciative hands. Although Missouri did not make a display, she was considered the good worker along the right path in the West. We also, to our credit, showed effective work done, such as the Mt. Vernon Sanitarium and the splendid organization of some of the Missouri cities and counties; the work in St. Louis, of educating the masses in the unique outdoor lectures, received favorable comment on many occasions.

The scientific program was divided into seven sections, seven different meetings on different subjects, in several languages, all referring to the bacillus tuberculosis, were held at the same hours each day; however, joint sessions of two or more sections on allied topics, were held; and to the credit of the programe committees it must be said that all essayists were on hand and everything moved with clock-like precision.

Secretary of the Interior Cortelyou, in his opening address, gave valuable statistics, gathered by the government, which appalled even those who were versed in such lore. Among the more striking points in this address were the statements, that in 115 years of yellow fever scourge, a less number of deaths could be attributed to this cause, during all that period, than to the one disease tuberculosis in the year 1907 alone; that three times less deaths occurred in action and from wounds during over four years of the Civil War than from consumption during the past four years. He made the further statement, that if a war in the United States were to carry off 150,000 people each year, we would be horrified beyond measure, while such, in fact and figure, is the annual loss from tuberculosis.

After short talks from many of the foreign delegates and representatives, in as many different languages, the now world famous Congress on Tuberculosis was declared at labor.

Germany was well represented by famous men, Koch, staid and stoic, the cynosure of all eyes, receiving ovation after ovation in a calm, expressionless and dignified manner, while every one wondered what new thing he might have to say to startle the nations. His position was the same as that which he expressed in 1901, during the

British session, that human infection by bovine tubercle bacilli rarely occurs; clinging tenaciously to the rarity of its occurrence he admitted that it does occur. His splendid tribute to the work of Dr. Theobald Smith of Boston, who first called attention to the different biological features of human and bovine tubercle bacilli, which Koch acknowledged caused him to pursue further researches, was proudly received and applauded by the American contingent, the other nations joining heartily in the applause. Prof. Smith, from that moment raised to the eminence of being the next most important personage in the meeting, rose to discuss Prof. Koch's able paper, and it was at once seen that he differed widely from the views expressed by the eminent German. One notable quotation was to the effect that in one-half of the babies afflicted with tuberculous glands of the neck and in the abdomen, cow's milk had been the traceable cause of the infection. Prof. Arloing of Lyons, France, concluded his remarks by saying that his experience revealed the fusion of the classic types, and urged the necessity of extreme precaution against tuberculosis, both human and bovine. Koch's own government aligns herself against Koch's views, recognizing even more strongly than his opponents the expediency of strict bovine inspection to avoid the spread of tuberculosis in Germany. Dr. Raw, of England, while appreciating two distinct infections, said his work and observations led him to the conclusion that with the eradication of bovine tuberculosis infant mortality from this cause would be reduced to a minimum. Dr. Newsholme, of England, after multifold experiments, concluded similarly regarding its transmissibility. Our own Ravenel, of Wisconsin, after numerous experiments, has proven, indisputably, the similarity of both forms of tuberculosis, and would regard it as extremely unfortunate if the impression should go forth from the meeting that few cases were due to bovine tuberculosis infection. Prof. Koch's extreme stand seems unfortunate; his influence is such that his views on the extreme rarity of bovine infection can be so garbled as to make it appear that bovine infection, as a cause of tuberculosis in the human, is nil; and the American people are so readily convinced that the great Professor Koch must be right, that such a result would be most unfortunate for man. Koch admits, however, that the infection does occur; be it but once in one thousand it is once too often, and we must not lose sight of this serious fact. We must consider also that for several years he has been engaged in other bacteriologic channels, and while his conclusions may be accurate through the work of others under his guidance, it must not be forgotten that the Americans, the French, the English and other Germans were there who personally reported what their findings were and concluded with one accord against

Prof. Koch. It is therefore hardly a case of the one man of the jury considering the other eleven obstinate. We can not and would not so view it, because it would be untrue, but a difference of opinion of rarity and common occurrence does exist. And by far the majority of equally painstaking workers lean toward the commonness of transmission.

In Section 7 (Tuberculosis in Animals and Its Relation to Man), a rather impressive paper was read by Hess of New York, in which he stated that in 107 samples of milk, taken from dairy wagons promiscuously, he found 16 per cent. contained tubercle bacilli. And thus throughout the meeting, in every section, research work was reported and all without exception unequivocally opposed Prof. Koch's ideas of the rarity of the occurrence of bovine infection in the human.

The feature of early diagnosis seemed next to attract widespread attention. Von Pirquet demonstrated his cutaneous reaction at the Children's Hospital. He now uses the Koch Old Tuberculin pure—not the 25% solution he at first advocated. Detri, at the same time, offered his combined cutaneous method,—vaccination with human and bovine tuberculin—to show by which bacillus the child was infected. If by bovine tubercle, the bovine inoculation should show a reaction in from 12 to 24 hours; if by human tubercle bacillus the area of human tuberculin would react. It is seen therefore that many conclusions can be arrived at. Time and work under less exacting surroundings will prove their percentage utility.

Calmette was there, and his paper dealt with the ophthalmo reaction. His results were gratifying in 6,000 cases and he had met with no unfortunate experiences; but every one else apparently had a more or less different result to relate, for it seemed that the ophthalmo reaction is on the wane. It may be said at this point in passing that the lay press, ever alive to the dramatic, seized upon this discussion and made the most of it as a news feature; while the ever loquacious, garrulous doctor, rushed into print and objected to something concerning which he had no conception, either as to its *modus operandi* or its diagnostic value.

The serum treatment came in for an afternoon of interesting discussion. Many serums were shown and many views, encouraging and discouraging, were expressed, showing that the experiments and results obtained are widely at variance. In a few years, perhaps, more definite results in larger numbers may bring the Utopia in serum treatment.

If the work of this famed congress did no more than impress facts that are old, and revive the interest of the world in this dread de-

stroyer and teach that prevention is best and that early recognition and early cure offer the most favorable results, its work can be called blessed.

It should be a source of great pride to the medical profession of this country that the attendance at this congress was so large, that the interest was so intense and that American physicians and the American people have been found to be fully alive to the great opportunities before them, and fully capable of meeting and solving problems that are agitating the greatest intellects in the world in the work of preventing and curing disease. In this labor the newspapers of this country are beginning to show a high appreciation of the part which they should play in furthering the objects to be attained, and during the congress all the great dailies throughout the country gave largely of their space and faithfully reported the deliberations of this great gathering.

L. H. B.

CARSON CONVICTED.

The conviction of Hiram Carson, alias "Dr. H. C. Carson," of Kansas City, for practicing medicine without a license, is a distinct victory for the State Board of Health and for the prosecuting attorney of Kansas City, and further confirms the powers of the State Board in punishing violators of the new medical practice act. Carson was assessed the maximum fine ($500.00), the decision being rendered by Judge Porterfield of the criminal court.

Mr. George Creel, editor of the *Independent,* began the crusade against Carson two years ago, assisted by the Jackson County Medical Society, and the case has dragged along through this period of time due, chiefly, to the dilatory tactics of the attorneys for the defense. The state's attorneys were Messrs. Walsh, Morrison and Bland, of Kansas City. In commenting upon the case the *Independent* says:

"This conviction is the beginning of the end for the laughable old charlatan who has battened on this section for so many years. He has appealed, of course, but that in no wise operates as a stay of execution against further prosecution. To be sure, he has fifteen attorneys, but they are a high-priced, rapacious lot, and their steady employment will prove a drain that even Carson's overflowing coffers will find it hard to stand.

An effort will also be made to secure his arrest on felony charges, such as obtaining money under false pretenses, for what else is it when he takes the last dollar from consumptives, and gives them tissue paper slips as a guaranteed cure?

More stringent legislation should also be passed at the next session so that the outrageous fellow can be permanently put out of business, and all the horde of cancer ghouls and similar quacks along with him. They have cursed this community long enough, and the mere fact that they spend thousands of dollars in advertising does not give them any standing in the eyes of the law."

As evidencing some of the methods pursued by Carson, in his business of relieving the sick and afflicted, the following from the *Independent* is illuminating:

"Carson occupied a witness chair several days handrunning. By the advice of his counsel, James A. Reed, he refused to answer almost every question on the ground that it would *tend to incriminate him,* but under Mr. Walsh's grueling examination, the following facts were brought out:

That his only medical education was secured from the American Health College of Cincinnati, a fake institution that was suppressed by the authorities.

That his first method of treatment was a sort of massage with vaseline, plentifully mixed with red pepper so that it would give the effect of 'magnetism' or 'vital force.'

That he progressed to the 'tissue slip' plan. These slips, which he claimed to 'magnetize' by holding between his hands, were alleged to cure every disease if pinned to the underwear or night-dress, between the shoulder blades, 'over the great nerve center of the human body.'

That he did not know, at the time of holding them between his palms, whether he 'magnetized' them or not, and that he had to wait for 'results' to find out. But it was shown that he always got his money in advance, and that there were no cases of refund except when prosecution was imminent.

That this paper, which he claimed to be of a 'very peculiar kind,' was bought from a local paper house, and cut up to his order.

That he had no knowledge that would enable him to tell one disease from another, and that skilled advertising writers were responsible for his learned discourses."

DELEGATES TO INTERNATIONAL CONGRESS ON TUBERCULOSIS MEET AT MARQUETTE HOTEL.

About sixty delegates from Texas passed through St. Louis on their way to Washington, D. C., to attend the International Congress on Tuberculosis. At an informal meeting of members of the Texas, Missouri and Kansas delegations held at the Marquette Hotel, the following resolutions were unanimously adopted:

WHEREAS, the tendency of physicians and charitable organizations over the country is even now to send advanced, indigent con-

sumptives from their homes to climatic resorts, notably parts of Texas, Colorado, and the Southwest, and

WHEREAS, the consensus of opinion among the best authorities is that climate alone can not cure tuberculosis, and

WHEREAS, boarding houses and hotels in many resorts no longer open their doors to this class of people, thereby depriving them of any chance of securing proper accommodation, and

WHEREAS, the sanitariums and eleemosynary institutions of the Southwest are already overburdened with such cases and the people are called upon to do double duty in that they must take care of others besides their own consumptives;

THEREFORE, be it resolved, that all states and territories throughout the country and all physicians and charitable organizations be urged to discourage the aimless drifting of the average consumptive, and that all advanced consumptives be kept within the confines of their own city, county, or state, and that the legislatures of the several states be urged to pass such laws as will insure the building and maintenance of sanitariums for curable cases and hospitals for advanced and incurable cases.

EDITORIAL NOTES

THE FISCAL YEAR of the State Association has been changed and now ends on December 31st, instead of April 1st. Dues for membership in the State Association therefore must be paid to the state secretary on or before January 1st of each year.

COUNTY SOCIETIES may receive new members (not delinquent members) after October 1st and credit them with membership for the balance of 1908 and all of 1909. The state secretary will register such members as members of the State Association from the time of election in the local society to December 31st, 1909, and the JOURNAL will be sent to them during the same period.

THE OFFICERS of the Section of Diseases on the Eye, Ear, Nose and Throat are anxious to obtain the names of members who are doing special work in these branches. The information is desired so that the officers can prepare a program for the Section at the next annual meeting. All members who wish to be identified with the work of the Section on Eye, Ear, Nose and Throat, are requested to so inform the officers. Communications should be addressed to Dr. J. H. Thompson, Kansas City, or Dr. T. McLemore, Nevada.

A TRAVELING "eye specialist," sailing under the cognomen of "Dr." H. M. Blumenthal, was given a "treatment" in 'Squire McVeigh's court at

Gallatin, and fined $50.00 and costs for practicing medicine without a license. The Gallatin *Democrat,* commenting upon Blumenthal's achievements as an eye specialist, remarks as follows: "Dr. Blumenthal has been making Gallatin for several months. He was a pleasant appearing fellow with a foreign brogue and we did not suspect him as being a 'quack.' He had a number of patients here and we understand was paid very large fees by some of them—in fact a member of the *Democrat* force is still catching at his breath, the result of the near-separation from $35 cash for a pair of the doctor's powerful glasses and some of his 'magic' eye wash."

These charlatans are almost always "pleasant appearing" fellows, and it is quite characteristic for them to affect a "foreign brogue," an accomplishment which seems to act as an anesthetic in the operation of separating the victim from his money.

We are indebted to Dr. M. A. Smith, secretary of Daviess County Medical Society, for the above information and we feel sure that the announcement will be of interest and a source of encouragement, to members of other county societies in their efforts to protect the public from charlatanism and quackery.

The Following Articles have been accepted by the Council on Pharmacy and Chemistry:

Adrin Sol. 1:500 (H. K. Mulford Co.).
Adrin Tablets 1-65 gr. (H. K. Mulford Co.).
Adrin Tablets 1-100 gr. (H. K. Mulford Co.).
Adrin Tablets 1-200 gr. (H. K. Mulford Co.).
Adrin and Cocaine Hydrochl. Tablets (H. K. Mulford Co.).
Adrin and Sparteine Sulphate (H. K. Mulford Co.).
Adrin Ointment (H. K. Mulford Co.).
Adrin Suppositories (H. K. Mulford Co.).
Adrin Comp. Vaginal Suppos. (H. K. Mulford Co.).
Gr. Eff. Carlsbad Salt (Artificial) with Phenolphthalein (Mulford Co.).
Panase (F. Stearns & Co.).
Panase Essence (F. Stearns & Co.).
Panase Tablets (F. Stearns & Co.).
Hemaboloids (Palisade Mfg. Co.).
Spirosal (Farb. of Elberfeld Co.).
Gr. Eff. Bromide and Acetanilide Comp. (H. K. Mulford Co.).
Gr. Eff. Caffeine and Sodium Comp. (H. K. Mulford Co.).

From the former list, Ichthyolum Austriacum has been omitted, and at the request of the manufacturer the title "Diabetin" has been changed to "Levulose, Schering."

OBITUARY

H. W. BARTSCHER, M. D.

Dr. H. W. Bartscher, whose sudden death in the court room after leaving the witness stand, shocked his professional brethren as well as the citizens of St. Louis to an unusual degree, was born in St. Louis on the 10th of May, 1859. He was entered as a pupil in the Clay public school at an early age. After passing through the grammar school he attended the Central High School, from which he was graduated at the age of eighteen, in the spring of 1877. Immediately after graduation he became a student in the St. Louis Medical College from which he received his degree in 1880. For the next three years we find him adding to his experience through work in the city institutions; for one year he served as an interne at the City Hospital, one year at the Female Hospital, and one year at the Poor House—the department for the chronic insane of the St. Louis Insane Asylum. At these two latter institutions he also acted in the capacity of druggist.

After exhausting the clinical opportunities of his native city, he repaired to Europe for post graduate study, and under Grawitz at Greifswald, Virchow and Koch at Berlin, and at the great clinical school of Vienna, he acquired that thorough knowledge in pathology and clinical medicine which upon his return to St. Louis made him the scientific, successful practitioner.

Unlike most general practitioners, he continued to the time of his death to keep himself abreast of the advances in pathology and bacteriology, more especially in their application to clinical medicine. His thorough scientific training in the laboratories of Europe pre-eminently fitted him to teach the subjects in which he was most interested,

and no classes of students have received more thorough training in histology, bacteriology, and pathology than those who enjoyed the privilege of his instruction, as he occupied at various times these chairs in the Beaumont Hospital Medical College. To him more than to anybody else was due the thorough laboratory equipment which was an especial feature of that institution during its existence.

He was conscientious to a fault. Infectiousness was to him no theory but a living practical fact. He carried to its logical sequence the knowledge concerning infectiousness and contagiousness which he had obtained in the laboratory and applied it in the management of the patient and his surroundings.

Nor was medicine the sole object of his efforts nor the only source of his pleasures. A student of nature in its widest acceptation, he was fond of nature's scenery; he loved flowers, as a beautiful garden which he cultivated with the assistance of his mother, his constant companion, eloquently showed. No distance was too great and no trip too arduous which promised new scenery or held out the possibility of plucking a rare flower even from the edge of a dangerous precipice. In the sweet communion with nature's most enchanting voice he was enraptured beyond expression. He acquired unusual dexterity in the interpretation of the master minds of music upon the pianoforte, and as he studied the minute construction of the human organisms, so he also studied the scientific side of music; and the compositions which he essayed give abundant evidence how thoroughly he had grasped the underlying principles of music.

But perhaps his strongest point, besides that of a successful practitioner, was his public spirited and persistent endeavor to make felt the influence of the medical profession upon the public weal. As a member of the organized profession he took an active part in its work and cheerfully assumed every duty assigned to him. He had the highest conception of civic duty; no organization having for its object the betterment of the hygienic condition of our city, but what he was an active participant in its work. To his efforts are due, more than to those of any other single individual, the enactment of the pure food bill at the last session of the legislature. The defects of this statutory enactment he was about to cure by the introduction of such amendments as he had under consideration in order properly to protect the public health against the insidious ravishments of those who acquire wealth at the expense of the public health.

The modest retiring personality of our deceased brother concealed very successfully the kind heart, the noble spirit and the professional enthusiasm which was always brightly aflame.

He was an upright man; a good citizen and most loyal friend.

F. J. L.

COUNTY SOCIETY NOTES

ATCHISON COUNTY MEDICAL SOCIETY.

The Atchison County Medical Society met at Fairfax, Tuesday, August 25th. All officers were present.

Dr. J. A. Postlewaite read a paper on "Fractures." All present took part in the discussion of the subject.

The subject for general discussion, typhoid fever, was considered, and the opinion prevailed that in infected individuals the germ-causing symptoms of typhoid remain active in the system much longer than is generally supposed; consequently, it is necessary to caution persons, after being well advanced in convalescence, about the danger of conveying the infection to others by the indiscriminate disposition of the discharges from the body.

Medical organization in this county is fairly good. The attendance at the meetings is not as large as it should be, but the members are very punctual about paying their dues and seem very much interested in the welfare of the society.

The next meeting is to be held at Tarkio, December 1, 1908.—Austin McMichael, M. D., Secretary.

CASS COUNTY MEDICAL SOCIETY.

The Cass County Medical Society met at Harrisonville, September 3, 1908. Dr. W. F. Chaffin called the society to order.

Dr. J. S. Triplett, of Harrisonville, read a very interesting paper, giving a vivid description of the Chicago meeting of the American Medical Association.

On motion Dr. Chaffin was selected to represent the society at the Antituberculosis Congress, to be held in Washington, D. C.

Dr. W. M. George, of Harrisonville, reported a very interesting case of tetanus, giving in detail the history and treatment.

Dr. Chaffin, of Raymore, reported a case of luxation of the knee, giving treatment and results, which were good.

The question of the society giving a banquet to its members and physicians of the county, was discussed, and on motion it was voted that this banquet be held at the next regular meeting.

Dr. Small, of Austin, applied for membership and was accepted.

Society adjourned to meet Thursday, November 5, 1908.—R. P. Yeagle, M. D., Secretary.

COOPER COUNTY MEDICAL SOCIETY.

The Cooper County Medical Society met in Boonville on Tuesday, October 6th, at the offices of the president, Dr. R. L. Evans.

Members present: Drs. H. V. Cordry, R. L. Evans, F. R. Smiley and J. R. Lionberger.

Dr. Evans presented a case of duodenal ulcer in which the first symptom to present itself was a severe hemorrhage. Another feature

of the case was the icterus which followed the hemorrhage, the icterus being most probably of a hematogenous origin.

Dr. Smiley presented a case of typhoid in which perforation occurred at the end of the second week, with a fatal termination. Seven days previous to the perforation the patient had had a severe pain in the right side, but no other symptoms appeared until peritonitis set in.

These and other cases were discussed by the members present and the meeting was of interest throughout.

The society adjourned to meet the 10th of November at the Missouri State Training School, where a good supply of clinical material is always available.—Jno. R. Lionberger, M. D., Secretary.

GREENE COUNTY MEDICAL SOCIETY.

MEETING OF SEPTEMBER 11TH.

After a two months' vacation the society met with 32 members in attendance. It was decided that we should continue to meet in the city council chamber and that our library would be taken care of by the librarian of the public library.

Dr. J. P. Ralston read an interesting paper on "Accidental and Unavoidable Hemorrhages." He spoke principally about hemorrhages due to childbirth. The paper was discussed by Drs. Sayres, Ruyle, Camp, Evans, Boyd, Matthews, Elkins and others.

MEETING OF SEPTEMBER 18TH.

The Post Graduate Course. Dr. J. R. Boyd gave a clinical lecture on "Physical Diagnosis: Diseases of the Heart." He called special attention to organic diseases of the heart in infancy and childhood and the good results that could be obtained from the early treatment of such cases.

MEETING OF SEPTEMBER 25TH.

Owing to the absence of Dr. T. A. Coffelt, attending the Tuberculosis Congress at Washington, D. C., Vice-President Dr. B. F. Fortner presided at the meeting. A letter from State Secretary was read, instructing that all new members secured now would be entitled to all privileges until December 31, 1909. One application for membership received.

Dr. H. S. Hill read a very practical paper entitled: "Some of the More Frequent Abnormal Presentations." He said abnormal presentations are usually due to abnormal conditions in the mother or foetus; an early diagnosis of abnormal presentations is very essential to a favorable termination of the labor and the saving of the lives of both child and mother. Anesthetics should be employed in all cases where operative interference is resorted to, yet one must be governed by the exigencies of the case and always remember that haste is an important factor in the case.

The paper was discussed by Drs. N. C. Williams, Smith, Oldham, Anderson, Ruyle, Pursselley and Camp.

Dr. B. F. Fortner read a carefully prepared paper entitled "Concussion." He treated the subject in an original manner, describing it as a "violent shaking," not alone of the brain, but it may be of the liver, kidneys, stomach and even the heart, under certain circumstances, sufficient to stop the body organs for a time at least from performing their

normal functions, thus materially lowering the recuperative powers and the vitality.

Concussions and contusions differ only in the amount of injury done. It requires a given amount of force and resistance to cause concussion; whether in a runaway buggy, car or automobile, the difference is only one of degree. Much depends on the partitions and different planes of resistance inside of the cranial cavity. Concussion does not apply to the cord.

Drs. Smith, Neer and Ruyle discussed the paper.—J. L. Ormsbee, M. D., Secretary.

HOLT COUNTY MEDICAL SOCIETY.

The Holt County Medical Society met at Oregon, September 10th.

Dr. Bullock read a paper on "Gun Shot Wounds," and exhibited several different forms of projectiles, taking up each one in its respective order, when referring to the injury done to the tissues. Discussion and consideration of the paper took up most of the time of the session; much work, therefore, had to be postponed until the next meeting of the society, which will take place at Maitland, Thursday evening, November 5th.

Drs. McClanahan and Kearney were elected to membership.

Drs. E. E. Miller, T. O. Davis, W. C. Proud, B. B. Simmons and F. E. Hogan will appear on the program for November 5th.—J. F. Chandler, M. D., Secretary.

JOHNSON COUNTY MEDICAL SOCIETY.

The Johnson County Medical Society met in regular session at Warrensburg, September 8, 1908.

Dr. Samuel A. Murry, of Holden, was elected to membership. Our society has at present a membership of thirty. Very few of the eligible physicians of the county are not on our roster.

The special number of our literary program was a paper on "Preventive Medicine," by Dr. M. P. Overholser, of Harrisonville, councilor for the district. We enjoyed the paper very much. The lines of education, agitation, organization and legislation presented in this paper should be kept before the medical fraternity by such talks, papers and public addresses. We have invited him to come back on October 13th, our next meeting date, to deliver an address, to which the public will be invited, and special efforts will be made to have a large attendance.

From now on our meetings will be monthly instead of quarterly.

I believe that even in our limited field we have a great work to accomplish.—E. H. Gilbert, M. D., Reporter.

LINN COUNTY MEDICAL SOCIETY.

The Linn County Medical Society met in Linneus, Tuesday, August 11th. The attendance was not as large as had been anticipated, but good interest was manifested in the proceedings by those who were present.

Two papers were read and discussed; the first by Dr. Ola Putman, of Marceline, on "What Major Operations Should be Attempted in Private Homes," the second paper by Dr. Robert Haley, of Brookfield,

on "Corneal Ulcers." The discussions on both these papers were animated and brought out a great deal of interesting information.

The next meeting of the society will be held at Meadville, in October.

MONITEAU COUNTY MEDICAL SOCIETY.

The regular quarterly meeting of the Moniteau County Medical Society was held in Dr. W. R. Patterson's office at Tipton, September 10th. The president, Dr. A. V. Thorpe, was absent and the vice-president, Dr. L. L. Latham, presided over the meeting. At roll call the following were present: Drs. J. P. Burke, J. H. Lang, Henry Freudenberger, L. L. Latham, J. W. Marsh, J. B. Norman, W. R. Patterson, J. M. Robertson, G. S. Wilson, W. H. Reynolds and Harry Marsh; visitors, Drs. Chas. Fry, John Taylor and J. L. D. Blevens.

Dr. J. W. Marsh read a paper reporting a case of appendicitis in which almost all the cardinal symptoms were absent. The necropsy showed a perforated appendix. The discussion of this case was unusually interesting and each one present took part.

Dr. G. S. Wilson presented an interesting case.

Upon motion, Drs. W. R. Patterson, L. L. Latham and J. H. Lang were appointed a committee to arrange for a banquet, to be held at the time of the next meeting.

The society adjourned to meet in California, December 10th.—W. R. Patterson, M. D., Reporter.

ST. JOSEPH-BUCHANAN COUNTY MEDICAL SOCIETY.

The regular meeting of the society was held on Wednesday evening, September 9, at Dr. Woodson's Sanitarium, Mountain Meadow Park, in the suburbs of St. Joseph. In the absence of the president, Dr. Jacob Geiger was called to the chair.

Dr. Daniel Morton called attention to the need of an emergency ward at the police station, for the care of suspected insane or demented patients, pending examination and disposition of the case. It was suggested that the matter be referred to the Board of Health and City Council, in order that the proper arrangements may be made while alterations are in progress at the central station.

The secretary called attention to the International Congress on Tuberculosis, and requested the president to appoint delegates from the society.

Dr. Woodson gave an instructive lecture on the diagnosis and treatment of melancholia, which was listened to with marked interest.

After adjournment the members of the society were shown through the institution, which has recently been enlarged, the tour of inspection terminating at the dining room, where a most appetizing repast awaited the guests, covers being laid for forty-two.

Mayor Clayton, in a characteristic speech felicitated the medical profession of the city on having such an excellent institution as Dr. Woodson's, and upon living in the healthiest city in the United States. The mayor further said he believed an organized, capable medical profession was largely responsible for the world-wide reputation gained by St. Joseph as the healthiest city.

Dr. O. B. Campbell responded on behalf of the society, and a rising vote of thanks was tendered to Dr. Woodson for his generous hospitality.—C. W. Fassett, M. D., Secretary.

ST. LOUIS MEDICAL SOCIETY.

The St. Louis Medical Society resumed regular weekly meetings on September 19th. The scientific program of the evening consisted of a paper by Dr. Sidney I. Schwab, entitled "A Study in Paranoia," and one by Drs. Jesse Meyer and J. E. Cook, entitled "Intestinal Sand; the Banana as One of Its Sources." The meeting of September 26th was devoted to a consideration of a paper by Dr. W. B. Outten, entitled "Classification of Joint Injuries Occurring in the Surgery of Violence."

Both meetings were largely attended and the interest in the scientific work of the society showed no evidence of deterioration.

The Council will meet on October 7th.

BOOK REVIEWS

Diseases of the Nose, Throat and Ear. Medical and Surgical. By William Lincoln Ballenger, M. D., Professor of Otology, Rhinology and Laryngology, College of Physicians and Surgeons, of Chicago University of Illinois. Octavo, 896 pages, with 467 engravings and 16 plates. Cloth, $5.50 net. Lea & Febiger, publishers, Philadelphia and New York, 1908.

This new work is notable, in the first place, for its unusual breadth, as it fully covers the whole of the three subjects. The book is very comprehensive, for it deals with the surgical as well as the medical treatment of these regions, and also of the accessory sinuses. The work is lavishly illustrated with original drawings and in every respect reflects the best knowledge of the world on the subjects of rhinology, laryngology and otology.

The Principles and Practice of Modern Otology. By John F. Barnhill, M. D., Professor of Otology, Laryngology, and Rhinology, Indiana University School of Medicine; and Ernest de W. Wales, B. S., M. D., Associate Professor of Otology, Laryngology and Rhinology, Indiana University School of Medicine. Octavo of 575 pages, with 305 original illustrations, many in colors. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $5.50 net; half morocco, $7.00 net.

In the preparation of this work, which is intended for the use of students and practitioners of general medicine, the following objects among others have been kept in view: To modernize the subject; to correct certain traditional beliefs; to advocate the earliest possible prophylaxis and treatment; to emphasize the importance of a thorough examination and a definite diagnosis as a basis for rational treatment; and, finally, to illustrate thoroughly the text. These certainly are high aims and it would seem that the authors have succeeded in accomplishing what they have attempted to do. The volume clearly represents the results of personal experience as practitioners and teachers.

THE BROADER AIMS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.*

BY TORALD SOLLMANN, M. D., CLEVELAND, OHIO.

I. INTRODUCTORY.

For three years the Council on Pharmacy and Chemistry has labored at its task of investigating proprietary remedies, compiling and weighing evidence, editing and publishing information. With the appearance of the third edition of its little book—New and Non-Official Remedies—which will be out soon,** practically all the eligible proprietary preparations on the market will have been classified, and the end of this task will be in sight. Will this mean the end of the labors of the Council? At a recent meeting of the Board of Trustees of the American Medical Association four very active men were appointed, or reappointed, to the Council, to fill the places of those whose time of service had expired. The Trustees further acceded to the request of the Council for the appointment of a staff of clinical consultants or associates. This does not look as if the Council intended to go into retirement.

Of course, there will need to be continued investigations of new discoveries and some supervision over those which have been approved. Products which for one reason or another have not yet come up to the requirements, are making serious, honest endeavors to do so, and it may be presumed that the number of these will increase. The aid extended to them for this end involves an amount of work which few outside of the Council can realize. But all this is routine, merely a part of what the Council has done all along. If this were to be its only work in the future, the membership of the Council could be reduced. The fact is, the work which the Council has done so far, important as it has been, was largely preliminary to a larger and broader aim—the general reformation of what is debased and debasing in the present status of therapy. The therapeutic evils of the day may have many roots and branches, and they all need more or less pruning. But the most glaring evils were those arising from prescribing secret or semi-secret proprietaries, and the reformation of these was accordingly the first goal of the Council. The first step was the obvious one of gathering the necessary information and it was on this that the Council has been mainly engaged; and this is the part of the work which is now largely accomplished.

The next step, which must soon be taken, is that of acquainting the medical public with what the Council has learned, and securing the cooperation of physicians in making this information effective. Up to the present the task of the Council has been laborious, indeed, but plain.

*Reprinted from Jl. Am. Med. Assn.

**Now ready.

Now it becomes more difficult. Up to the present time the Council could work in silence—now it must use its voice. What it has done and hopes to do; what use to make of its findings and advice; what part must be played in this movement for better therapeutics by every physician who cares for the welfare of his patients—for the progress of medicine—these matters must be thought out and discussed.

These were the thoughts and considerations which led me to accept the invitation of the chairman of the Council and editor of THE JOURNAL to write a series of short papers on these questions as I view them. I have accepted the invitation with honest diffidence, with the realization of deficiencies in ability, knowledge, opportunities and time. In extenuation, however, I plead the honest willingness to do my share toward a movement which, as I conceive it, is the most important that has occurred in the domain of medicine for a generation at least. Surgical technic, physical and clinical diagnosis, anatomy and pathology, laboratory research—in short, every department of medical science is making satisfactory progress. Therapeutics alone has not kept pace; in some respects it has gone backward. Is it fair to the patient to dismiss the subject with a shrug of the shoulders? How many have honestly and earnestly labored toward its advancement? Is it astonishing that therapeutics is where it is and what it is?

To avoid misunderstandings, I must emphasize that in these papers I shall speak as a private in the ranks and not as a member of the Council. I shall, indeed, aim to represent the sentiments of this body, as I know them; but as it would be obviously impractical to submit to them every word that I shall say, here and elsewhere, it would not be fair to saddle the Council with any of the responsibility.

(TO BE CONTINUED.)

AMERICAN MEDICAL ASSOCIATION.

Next Annual Meeting at Atlantic City, N. J., 1909.

President: HERBERT L. BURRELL, Boston.
President Elect: WM. C. GORGAS, Ancon, Panama.
Secretary and Editor: GEORGE H. SIMMONS, 103 Dearbon Ave., Chicago.

MISSOURI STATE MEDICAL ASSOCIATION.

Next Annual Meeting, Jefferson City, May 18, 19, 20, 1909

President: A. R. KIEFFER, St. Louis.
Vice Presidents:
D. B. FARNSWORTH, Springfield; W. J. FRICK, Kansas City; J. B. NORMAN, California; C. H. DIXON, Holliday; M. A. SMITH, Gallatin.
Secretary: A. W. McALESTER, Jr., Kansas City.
Assistant Secretaries: WILLARD BARTLETT, St. Louis; W. R. PATTERSON, Tipton; T. McLEMORE, Nevada.
Treasurer: J. FRANKLIN WELCH, Salisbury.

Medical Section.

Chairman: E. E. GILMORE, Adrian. Secretary: W. R. PATTERSON, Tipton.

Surgical Section.

Chairman: PAUL Y. TUPPER, St. Louis. Secretary, WILLARD BARTLETT, St. Louis.

Eye, Ear, Nose and Throat Section.

Chairman: J. H. THOMPSON, Kansas City. Secretary, T. McLEMORE, Nevada.

ORATORS.

Oration on Medicine:

R. H. GOODIER, Hannibal.

Oration on Surgery:

F. J. LUTZ, St. Louis.

COMMITTEES.

Committee on Scientific Work.

E. E. Gilmore, W. R. Patterson, Paul Y. Tupper, Willard Bartlett, J. H. Thompson, T. McLemore.

Publication Committee.

W. B. Dorsett, Chairman; M. B. Clopton, M. C. Shelton.

Committee on Public Policy and Legislation.

H. E. Pearse, Chairman; R. M. Funkhouser, F. R. Newberry.

Defense Committee.

F. J. Lutz, Chairman; W. B. Dorsett, Joseph Grindon.

Committee on Medical Education.

B. M. Hypes, Chairman; C. M. Jackson, O. B. Campbell.

Committee on Tuberculosis.

E. W. Schauffler, Chairman; Geo. Homan, J. R. Lemen, W. E. McKinley, J. R. Boyd.

Missouri Society of Medical Secretaries.

President, Foster W. Burke, Laclede; First Vice-President, M. A. Smith, Gallatin; Secretary-Treasurer, Chas. Wood Fassett. St. Joseph.

Societies in Affiliation with the State Medical Association.

County.	President.	Address of President.	Secretary.	Address of Sec'y.
Adair	J. S. Gashwiler	Novinger	E. C. Grim	Kirksville.
Andrew	John Husher	Rosendale	B. E. Miles	Fillmore.
Atchison	E. A. Lewis	Rockport	A. McMichael	Rockport.
Audrain	W. W. McFarlane	Mexico	C. A. Rothwell	Mexico.
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Clay	C. H. Suddarth	Smithville	F. H. Matthews	Liberty.
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Cooper	R. L. Evans	Boonville	J. R. Lionberger	Boonville.
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Grundy	Samuel Sheldon	Trenton	E. A. Duffy	Trenton.
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Monroe	C. H. Dixon	Holliday	W. T. Bell	Stoutsville.
Morgan	P. G. Woods	Versailles	H. N. Lutman	Versailles.
New Madrid	Welton O'Bannon	New Madrid	C. W. Watson	New Madrid.
Newton	R. L. Wills	Neosho	Horace Bowers	Neosho.
Nodaway	L. E. Dean	Maryville	C. E. Fronk	Maryville.
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Perry	T. M. Hudson	Perryville	F. M. Vessells	Perryville.
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Polk	J. E. Loafman	Bolivar	J. T. Roberts	Bolivar.
Pulaski	W. L. Ragan	Richland	E. A. Oliver	Richland.
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Reynolds	J. M. Lowrey	Centerville	T. W. Chilton	Corridon.
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Ste. Genevieve	F. E. Hinch	Ste. Genevieve	R. W. Lanning	Ste. Genevieve.
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Sullivan	J. C. Kessinger	Milan	J. S. Montgomery	Milan.
Taney	Chas. W. Burdett	Branson	Elizabeth McIntyre	Branson.
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